

Service Manual



DV-575A-S

ORDER NO.
RRV2921

DVD PLAYER

DV-575A-S

DV-575A-K

DV-578A-S

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Model	Type	Power Requirement	Region No.	Serial No. Confirm 3rd & 4th alphabetical letters.
DV-575A-S	KUXCN/CA	AC120V	1	&&TE#####\$
DV-575A-S	WYXCN	AC220-240V	2	&&TE#####\$
DV-575A-S	WVXCN	AC220-240V	2	&&TE#####\$
DV-575A-K	WYXCN	AC220-240V	2	&&TE#####\$
DV-578A-S	KUXCN/CA	AC120V	1	&&TE#####\$



For details, refer to "Important symbols for good services".

SAFETY INFORMATION



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.

Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

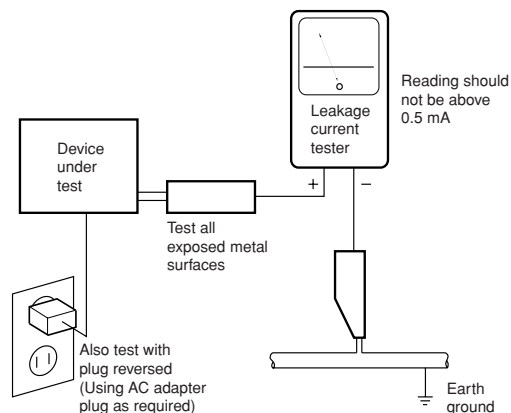
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual. The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.



This service manual is intended for qualified service technicians ; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING !

THE AEL (ACCESSIBLE EMISSION LEVEL) OF THE LASER POWER OUTPUT IS LESS THAN CLASS 1 BUT THE LASER COMPONENT IS CAPABLE OF EMITTING RADIATION EXCEEDING THE LIMIT FOR CLASS 1.
A SPECIALLY INSTRUCTED PERSON SHOULD DO SERVICING OPERATION OF THE APPARATUS.

LASER DIODE CHARACTERISTICS

FOR DVD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 650 nm
FOR CD : MAXIMUM OUTPUT POWER : 5 mW
WAVELENGTH : 780 nm

LABEL CHECK (for DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN)

CAUTION

: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

VORSICHT

: SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENNABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN!

ADVARSEL

: SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGA UDSÆTTELSE FOR STRÅLING.

VARNING

: SYNLIG OCH USYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRakta EJ STRÅLEN.

VARO!

: AVATTAESSA ALTISTUT NÄKYVÄ JA NÄKYMÄTTÖMÄLLE LASERSATEIL YLLE. ÄLÄ KATSO SÄTEESÄ.

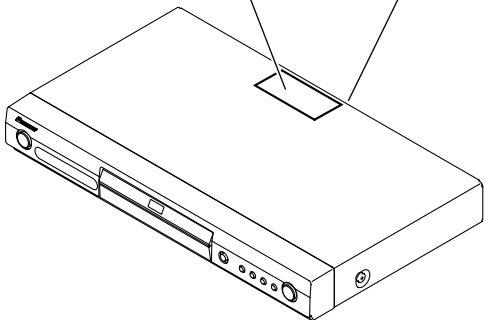
CUIDADO

: RADIACIÓN LASER VISIBLE E INVISIBLE AL ESTAR ABIERTO. EVITAR EXPOSICIÓN AL RAYO.

VRW1872

CLASS 1
LASER PRODUCT

(Printed on the Rear Panel)



Additional Laser Caution

1. Laser Interlock Mechanism
 - Loading switch (S101 on the LOAB Assy) is used for interlock mechanism of the laser.When this switch turned ON in SW2 (CLOSE) side (OPEN signal is 0V and CLOSE signal is 3.5V), a laser becomes the status which can completely oscillation.
Furthermore, the laser completely oscillates in the disc judgment and disc playback.
When player is power ON state and laser diode is not completely oscillating, 780nm laser diode is always oscillating by half power.
 - Laser diode is driving with Q7 (650nm LD) and Q8 (780nm LD) on the DVDM Assy.Therefore, when short-circuit between the emitter and collector of these transistors or the base voltage is supplied for transistors turn on, the laser oscillates. (failure mode)
 - In the test mode *, there is the mode that the laser oscillates except for the disc judgment and playback. LD ON mode in the test mode oscillates with the laser forcibly.The interlock mechanism mentioned above becomes invalid in this mode.
2. When the cover is open, close viewing through the objective lens with the naked eye will cause exposure to the laser beam.

* : See page 61.

[Important symbols for good services]

In this manual, the symbols shown-below indicate that adjustments, settings or cleaning should be made securely. When you find the procedures bearing any of the symbols, be sure to fulfill them:

A

1. Product safety

You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.

2. Adjustments

To keep the original performances of the product, optimum adjustments or specification confirmation is indispensable. In accordance with the procedures or instructions described in this manual, adjustments should be performed.

3. Cleaning

For optical pickups, tape-deck heads, lenses and mirrors used in projection monitors, and other parts requiring cleaning, proper cleaning should be performed to restore their performances.

4. Shipping mode and shipping screws

To protect the product from damages or failures that may be caused during transit, the shipping mode should be set or the shipping screws should be installed before shipping out in accordance with this manual, if necessary.

5. Lubricants, glues, and replacement parts

Appropriately applying grease or glue can maintain the product performances. But improper lubrication or applying glue may lead to failures or troubles in the product. By following the instructions in this manual, be sure to apply the prescribed grease or glue to proper portions by the appropriate amount. For replacement parts or tools, the prescribed ones should be used.

C

D

E

F

CONTENTS

SAFETY INFORMATION.....	2
1. SPECIFICATIONS	6
2. EXPLODED VIEWS AND PARTS LIST	8
2.1 PACKING	8
2.2 EXTERIOR SECTION (for DV-575A-S and DV-575A-K).....	10
2.3 EXTERIOR SECTION (for DV-578A-S)	12
2.4 FRONT PANEL SECTION (for DV-575A-S and DV-575A-K)	14
2.5 FRONT PANEL SECTION (for DV-578A-S)	16
2.6 04 LOADER ASSY	18
3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM	20
3.1 BLOCK DIAGRAM	20
3.1.1 SIGNAL ROUTE BLOCK DIAGRAM.....	20
3.1.2 POWER SUPPLY BLOCK DIAGRAM	22
3.2 WAVEFORMS.....	24
3.3 LOAB ASSY and OVERALL WIRING DIAGRAM	26
3.4 DVDM ASSY (1/3)	28
3.5 DVDM ASSY (2/3)	30
3.6 DVDM ASSY (3/3)	32
3.7 JCKB ASSY	34
3.8 FLKY and PWSB ASSYS (for DV-575A-S and DV-575A-K)	36
3.9 FLKY and PWSB ASSYS (for DV-578A-S)	38
3.10 POWER SUPPLY UNIT	40
4. PCB CONNECTION DIAGRAM	41
4.1 LOAB ASSY.....	41
4.2 DVDM ASSY.....	42
4.3 FLKY and PWSB ASSYS (for DV-575A-S and DV-575A-K)	46
4.4 FLKY and PWSB ASSYS (for DV-578A-S).....	48
4.5 POWER SUPPLY UNIT (VWR1376)	50
4.6 POWER SUPPLY UNIT (VWR1377)	52
4.7 JCKB ASSY	54
5. PCB PARTS LIST	55
6. ADJUSTMENT	59
6.1 ADJUSTMENT ITEMS AND LOCATION	59
6.2 JIGS AND MEASURING INSTRUMENTS	59
6.3 NECESSARY ADJUSTMENT POINTS	60
6.4 TEST MODE.....	61
6.5 MECHANISM ADJUSTMENT.....	62
7. GENERAL INFORMATION	64
7.1 DIAGNOSIS.....	64
7.1.1 TEST MODE.....	64
7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE	65
7.1.3 FUNCTIONAL SPECIFICATION OF THE SHORTCUT KEY	66
7.1.4 SPECIFICATION OF MODEL INFORMATION DISPLAY	67
7.1.5 FUNCTIONAL SPECIFICATION OF THE SERVICE MODE.....	68
7.1.6 METHOD FOR DIAGNOSING DEGRADATION OF THE LDS ON THE PICKUP ASSY	69
7.1.7 TROUBLE SHOOTING.....	70
7.1.8 ID NUMBER AND ID DATA SETTING.....	73
7.1.9 SEQUENCE AFTER POWER ON	76
7.1.10 DISASSEMBLY	77
7.2 IC	85
7.3 DISC / CONTENT FORMAT PLAYBACK COMPATIBILITY	96
7.4 CLEANING	98
8. PANEL FACILITIES	99

1

1. SPECIFICATIONS

A

KU/CA type

General

System DVD player
Power requirements
DV-575A / DV-578A AC 120 V, 60 Hz

Power consumption
DV-575A / DV-578A 11 W

Power consumption (standby)
DV-575A / DV-578A 0.07 W

Weight 2.1 kg / 4 lb 10 oz
Dimensions . . 420 (W) x 55 (H) x 243 (D) mm
. (16.5 (W) x 2.2 (H) x 9.6 (D) in.)

Operating temperature +5°C to +35°C
(+41°F to +95°F)
Operating humidity 5% to 85%
(no condensation)

Component video output

Y (luminance) - Output level 1 Vp-p (75 Ω)
P_B (color) - Output level 0.7 Vp-p (75 Ω)
P_R (color) - Output level 0.7 Vp-p (75 Ω)
Jack RCA

S-video output

Y (luminance) - Output level 1 Vp-p (75 Ω)
C (color) - Output level 286 mVp-p (75 Ω)
Jack S-video

Video output

Output level 1 Vp-p (75 Ω)
Jack RCA

Audio output (1 stereo pair)

Output level During audio output
200 mVrms (1 kHz, -20 dB)
Number of channels 2
Jacks RCA

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level During audio output
200 mVrms (1 kHz, -20 dB)
Number of channels 6
Jacks RCA jack

Digital audio characteristics

Frequency response 4 Hz to 44 kHz
(DVD fs: 96 kHz)
4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio 115 dB
Dynamic range. 101 dB
Total harmonic distortion. 0.0020 %
Wow and flutter Limit of measurement
(±0.001% W. PEAK) or lower

Digital output

Coaxial digital output jack. RCA jack
Optical digital output. Optical digital jack

Accessories

Audio/video cable 1
Power cable 1

Remote control 1
AA/R6P dry cell batteries 2
Operating Instructions
Warranty card (KU/CA type only) 1

The specifications and design of this product are subject to change without notice, due to improvement.

WY and WV types

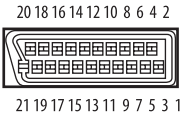
General

System DVD player
Power requirements . . . AC 220–240 V, 50/60 Hz
Power consumption 12 W
Power consumption (standby) 0.12 W
Weight 2.1 kg
Dimensions . . . 420 (W) x 55 (H) x 243 (D) mm

Operating temperature +5°C to +35°C
Operating humidity 5% to 85%
(no condensation)

AV connector output

AV Connector (21-pin connector assignment)
AV connector output 21-pin connector
This connector provides the video and audio signals for connection to a compatible colour TV or monitor.



PIN no.
1 Audio 2/R out
3 Audio 1/L out
4 GND
7 B out
8 Status
11 G out
15 R or C out
17 GND
19 Video out or Y out
21 GND

Component video output

Y (luminance) - Output level 1 Vp-p (75 Ω)
P_B (color) - Output level 0.7 Vp-p (75 Ω)
P_R (color) - Output level 0.7 Vp-p (75 Ω)
Jack RCA

S-video output

Y (luminance) - Output level 1 Vp-p (75 Ω)
C (color) - Output level 286 mVp-p (75 Ω)
Jack. S-video

Video output

Output level 1 Vp-p (75 Ω)
Jack. RCA

Audio output (1 stereo pair)

Output level During audio output
200 mVrms (1 kHz, –20 dB)
Number of channels 2
Jacks RCA

Audio output (multi-channel / L, R, C, SW, LS, RS)

Output level During audio output
200 mVrms (1 kHz, –20 dB)
Number of channels 6
Jacks RCA jack

Digital audio characteristics

Frequency response 4 Hz to 44 kHz
(DVD fs: 96 kHz)
4 Hz to 88 kHz (DVD-Audio fs: 192 kHz)
S/N ratio 115 dB
Dynamic range. 101 dB
Total harmonic distortion 0.0020 %
Wow and flutter Limit of measurement
(±0.001% W. PEAK) or lower

Digital output

Coaxial digital output jack. RCA jack
Optical digital output. Optical digital jack

Accessories

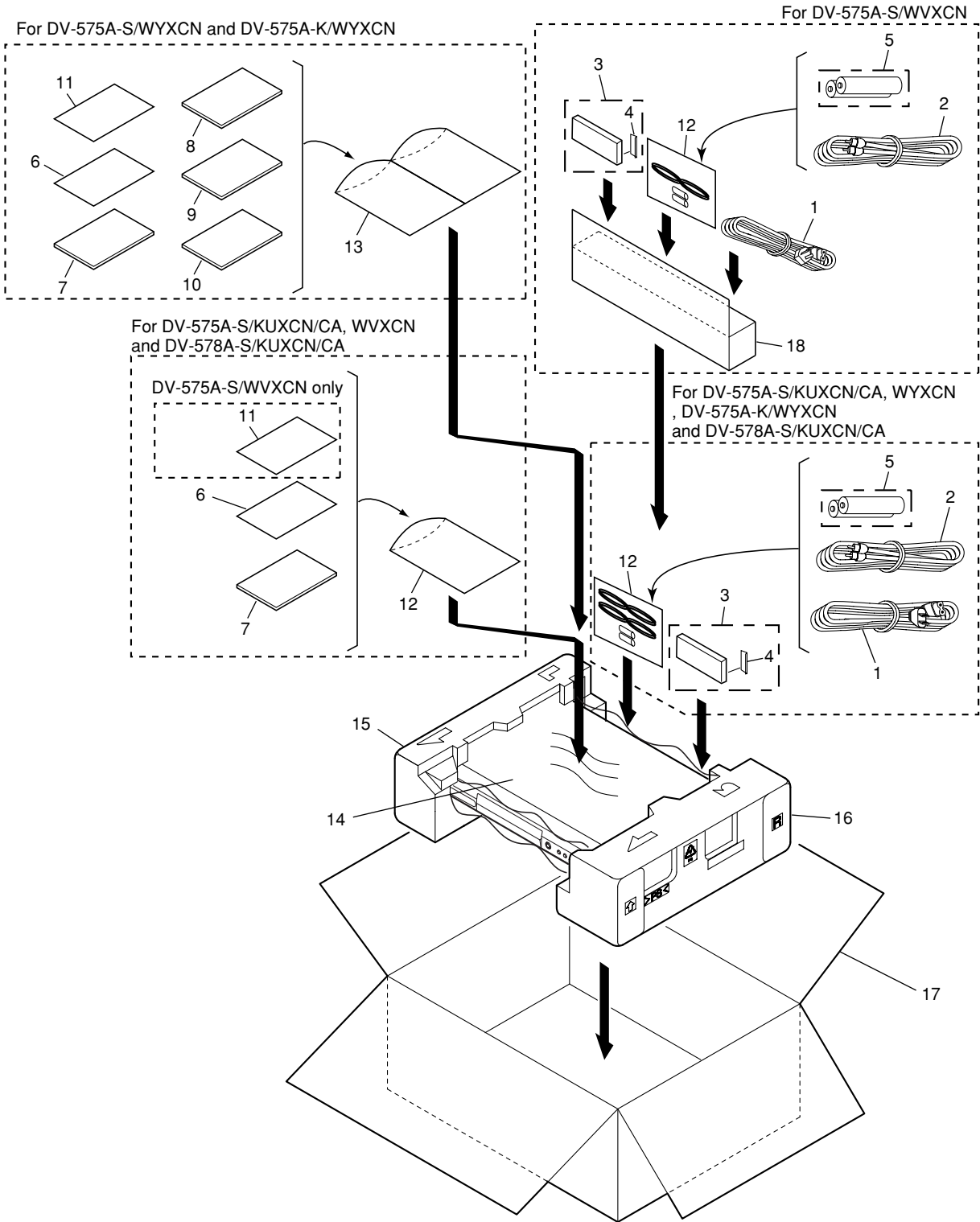
Audio/video cable 1
Power cable 1
Remote control 1
AA/R6P dry cell batteries 2
DivX compatibility sheet 1
Operating Instructions 1
Warranty card 1

1 2 3 4

2. EXPLODED VIEWS AND PARTS LIST

NOTES: ● Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
● The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
● Screws adjacent to ▼ mark on product are used for disassembly.
● For the applying amount of lubricants or glue, follow the instructions in this manual.
(In the case of no amount instructions, apply as you think it appropriate.)

2.1 PACKING



PACKING parts List

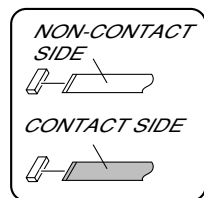
Mark No.	Description	Part No.	Mark No.	Description	Part No.
⚠ 1	Power cable	See Contrast table(2)	10	Operating Instructions (Spanish/Dutch)	See Contrast table(2)
2	Audio/Video Cable	VDE1078	11	DivX Compatibility Sheet	See Contrast table(2)
3	Remote Control	VXX2913	12	Polyethylene bag B5	VHL1051
4	Battery Cover	VNK4997	13	Polyethylene bag B5x2	See Contrast table(2)
NSP 5	Dry Cell Battery (AA,R6P)	VEM1010			
NSP 6	Warranty Card	See Contrast table(2)	14	Polyethylene Bag	VHL1076
7	Operating Instructions (English)	See Contrast table(2)	15	Pad L	VHA1358
8	Operating Instructions (English/Italian)	See Contrast table(2)	16	Pad R	VHA1359
9	Operating Instructions (French/German)	See Contrast table(2)	17	Packing Case	See Contrast table(2)
			18	Accessory Box	See Contrast table(2)

(2) CONTRAST TABLE

DV-575A-S/KUXCN/CA, WYXCN, WVXCN, DV-575A-K/WYXCN and DV-578A-S/KUXCN/CA are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-575A-S/ KUXCN/CA	DV-575A-S/ WYXCN	DV-575A-S/ WVXCN	DV-575A-K/ WYXCN	DV-578A-S/ KUXCN/CA
⚠ NSP	1	Power cable	ADG7022	ADG1154	ADG1156	ADG1154	ADG7022
	6	Warranty Card	ARY7045	ARY7065	ARY7065	ARY7065	ARY7045
	7	Operating Instructions (English)	VRB1331	Not used	VRB1332	Not used	VRB1331
	8	Operating Instructions (English/Italian)	Not used	VRD1192	Not used	VRD1192	Not used
	9	Operating Instructions (French/German)	Not used	VRD1193	Not used	VRD1193	Not used
	10	Operating Instructions (Spanish/Dutch)	Not used	VRD1194	Not used	VRD1194	Not used
	11	DivX Compatibility Sheet	Not used	VRX1049	VRX1049	VRX1049	Not used
	13	Polyethylene bag B5x2	Not used	VHL1069	Not used	VHL1069	Not used
	17	Packing Case	VHG2489	VHG2490	VHG2497	VHG2492	VHG2496
	18	Accessory Box	Not used	Not used	VHC1114	Not used	Not used

2.2 EXTERIOR SECTION (for DV-575A-S and DV-575A-K)



Refer to
"2.6 04 LOADER ASSY".

DV-575A-S/WYXCN, WVXCN
and DV-575A-K/WYXCN only

DV-575A-S/KUXCN/CA only

DV-575A-S/WYXCN, WVXCN
and DV-575A-K/WYXCN only

Refer to "2.4 FRONT PANEL SECTION".

EXTERIOR SECTION parts List (for DV-575A-S and DV-575A-K)

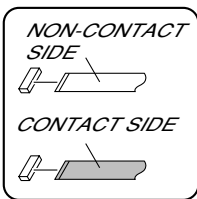
Mark No.	Description	Part No.	Mark No.	Description	Part No.
1	DVDM Assy	See Contrast table(2)	14	Rubber Foot	VEB1349
2	JCKB Assy	See Contrast table(2)	15	PCB Base	See Contrast table(2)
⚠ 3	POWER SUPPLY Unit	See Contrast table(2)	16	Rear Sheet	See Contrast table(2)
NSP 4	04 LOADER Assy	VWT1210	17	UL Cover	See Contrast table(2)
5	Connector Assy (13P)	VKP2320	18	Bonnet	See Contrast table(2)
6	Flexible Cable	See Contrast table(2)	19	KUC label	VRW2063
7	Connector Assy (5P)	VKP2324	20	Caution Label	See Contrast table(2)
8	Flexible Cable (15P)	VDA1991	21	Screw	BBZ30P060FNI
9	Adapter 2	VNL1967	22	Screw	BBZ30P080FNI
10	Binder	VEC2414	23	Screw	PPZ30P080FNI
11	Tray Panel	See Contrast table(2)	24	Screw	BBZ30P100FNI
12	DVD A/V Badge	See Contrast table(2)			
NSP 13	Base Chassis	See Contrast table(2)			

(2) CONTRAST TABLE

DV-575A-S/KUXCN/CA, WYXCN, WVXCN and DV-575A-K/WYXCN are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-575A-S/ KUXCN/CA	DV-575A-S/ WYXCN	DV-575A-S/ WVXCN	DV-575A-K/ WYXCN
⚠	1	DVDM Assy	VWS1582	VWS1583	VWS1583	VWS1583
	2	JCKB Assy	VWV1994	VWV1995	VWV1995	VWV1995
	3	POWER SUPPLY Unit	VWR1376	VWR1377	VWR1377	VWR1377
	6	Flexible Cable (5P)	VDA1995	Not used	Not used	Not used
	6	Flexible Cable (17P)	Not used	VDA1994	VDA1994	VDA1994
NSP	11	Tray Panel	VNK5411	VNK5411	VNK5411	VNK5413
	12	DVD A/V Badge	VAM1131	VAM1131	VAM1131	VAM1143
	13	Base Chassis	VNA2703	VNA2693	VNA2693	VNA2693
	15	PCB Base	VNE2279	Not used	Not used	Not used
	16	Rear Sheet	VRW2060	VRW2072	VRW2072	VRW2078
	17	UL Cover	VNK5524	Not used	Not used	Not used
	18	Bonnet	VNA2677	VNA2677	VNA2677	VNA2678
	20	Caution Label	Not used	VRW1872	VRW1872	VRW1872


2.3 EXTERIOR SECTION (for DV-578A-S)



Refer to
"2.6 04 LOADER ASSY".

Refer to "2.5 FRONT PANEL SECTION".

EXTERIOR SECTION parts List (for DV-578A-S)

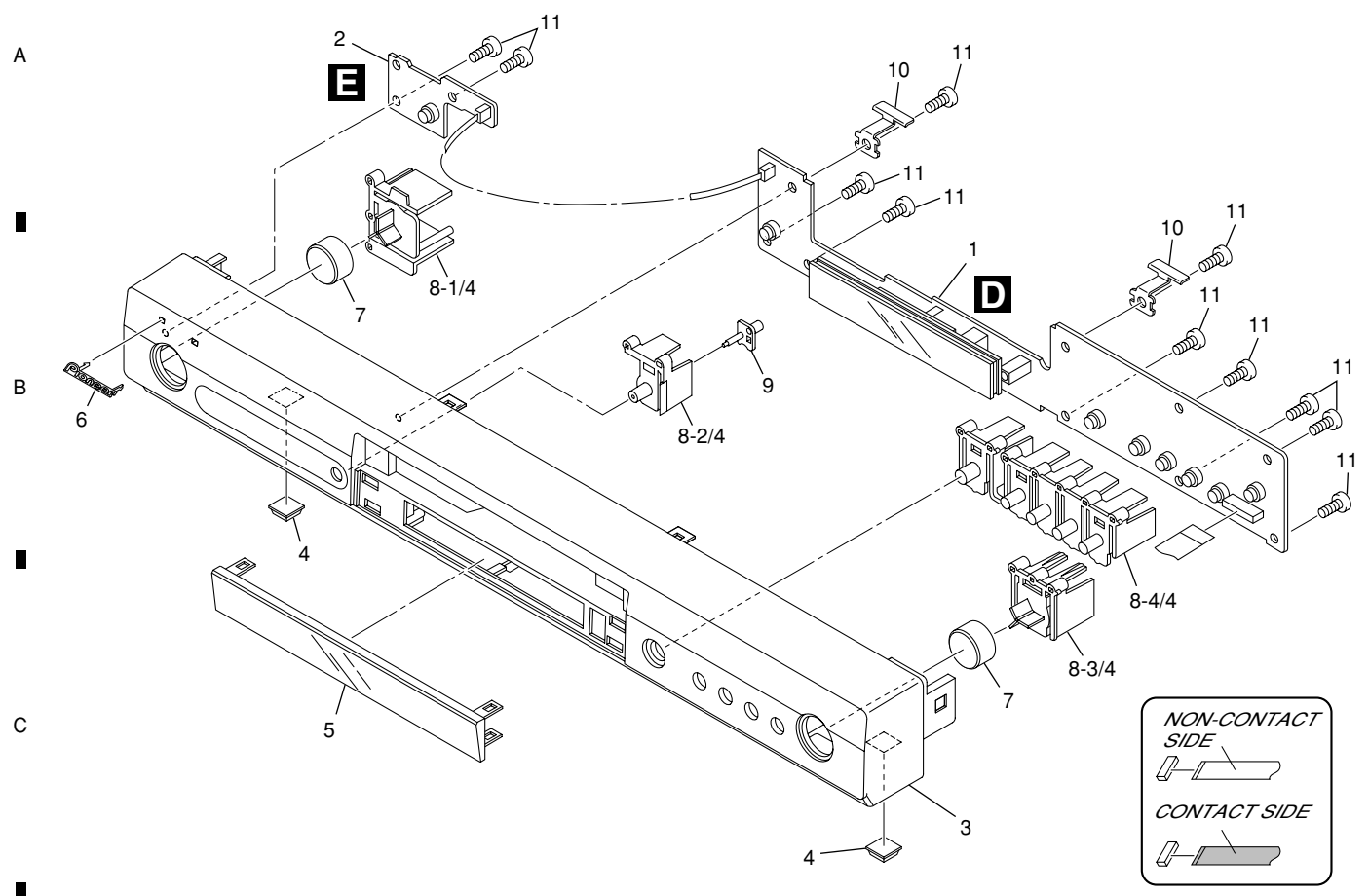
<u>Mark No.</u>	<u>Description</u>	<u>Part No.</u>	
1	DVDM Assy	VWS1582	
2	JCKB Assy	VWV1994	A
 3	POWER SUPPLY Unit	VWR1376	
NSP 4	04 LOADER Assy	VWT1210	
5	Connector Assy (13P)	VKP2320	
6	Flexible Cable (5P)	VDA1995	
7	Connector Assy (5P)	VKP2324	■
8	Flexible Cable (15P)	VDA1991	
9	Adapter 3L	VNL1962	
10	Adapter 3R	VNL1963	
11	Binder	VEC2414	B
12	Tray Panel	VNK5545	
13	DVD A/V Badge	VAM1131	
NSP 14	Base Chassis	VNA2703	
15	Rubber Foot	VEB1349	
16	PCB Base	VNE2279	■
17	UL Cover	VNK5524	
18	Rear Sheet	VRW2099	
19	Bonnet	VNA2677	
20	KUC label	VRW2063	C
21	Screw	BBZ30P060FNI	
22	Screw	BBZ30P080FNI	
23	Screw	PPZ30P080FNI	■

D

E

F

2.4 FRONT PANEL SECTION (for DV-575A-S and DV-575A-K)



	5		6		7		8	
FRONT PANEL SECTION parts List (for DV-575A-S and DV-575A-K)								
Mark No.	Description	Part No.	Mark No.	Description	Part No.			
1	FLKY Assy	See Contrast table(2)	7	Key Top	See Contrast table(2)			
2	PWSB Assy	VWG2482	8	Main Key	See Contrast table(2)			
3	Front Panel	See Contrast table(2)	9	LED Lens	VNK5415			
4	Rubber Foot	VEB1349	10	FP Angle	VNE2332			
5	FL Lens	VNK5414						
6	Pioneer Name Plate	See Contrast table(2)	11	Screw	PPZ30P080FNI			

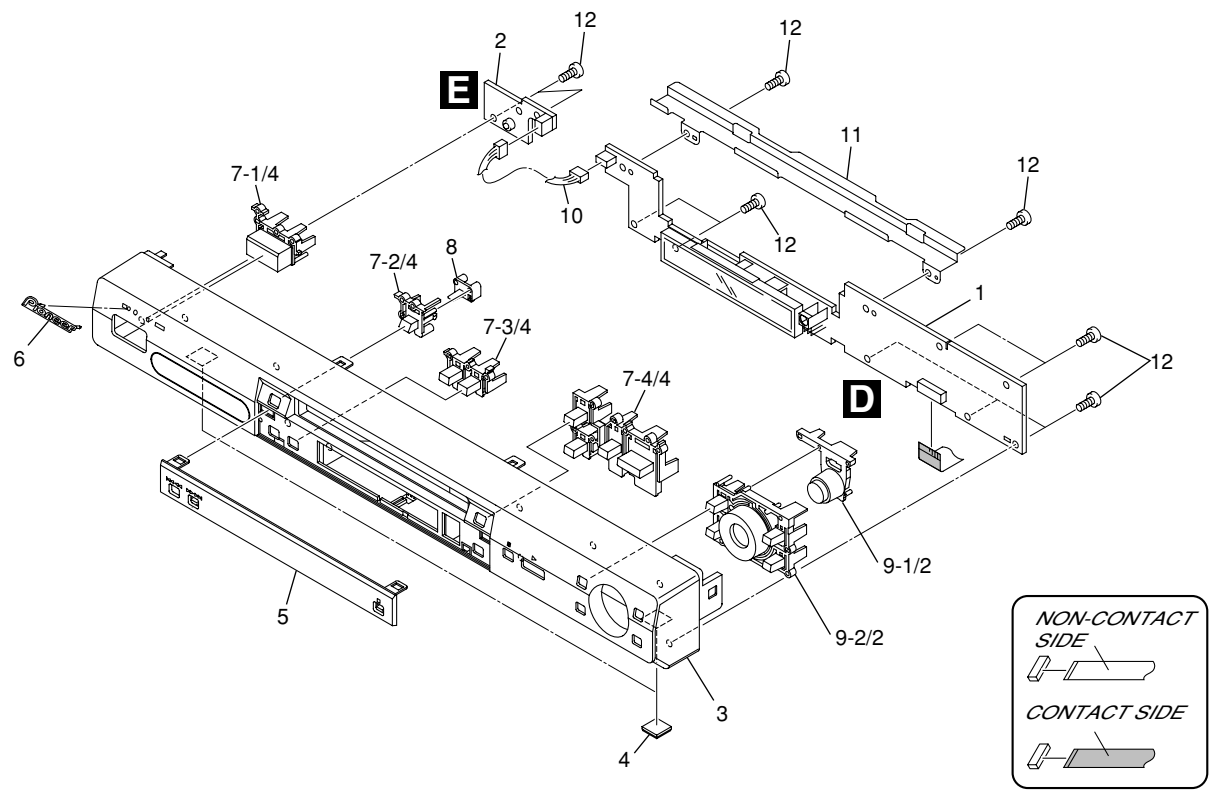
(2) CONTRAST TABLE

DV-575A-S/KUXCN/CA, WYXCN, WVXCN and DV-575A-K/WYXCN are constructed the same except for the following:

Mark	No.	Symbol and Description	DV-575A-S/ KUXCN/CA	DV-575A-S/ WYXCN	DV-575A-S/ WVXCN	DV-575A-K/ WYXCN
	1	FLKY Assy	VWG2483	VWG2484	VWG2484	VWG2484
	3	Front Panel	VNK5528	VNK5529	VNK5529	VNK5536
	6	Pioneer Name Plate	VAM1129	VAM1129	VAM1129	VAM1130
	7	Key Top	VNK5407	VNK5410	VNK5410	VNK5409
	8	Main Key	VNK5404	VNK5404	VNK5404	VNK5406

1 2 3 4

2.5 FRONT PANEL SECTION (for DV-578A-S)



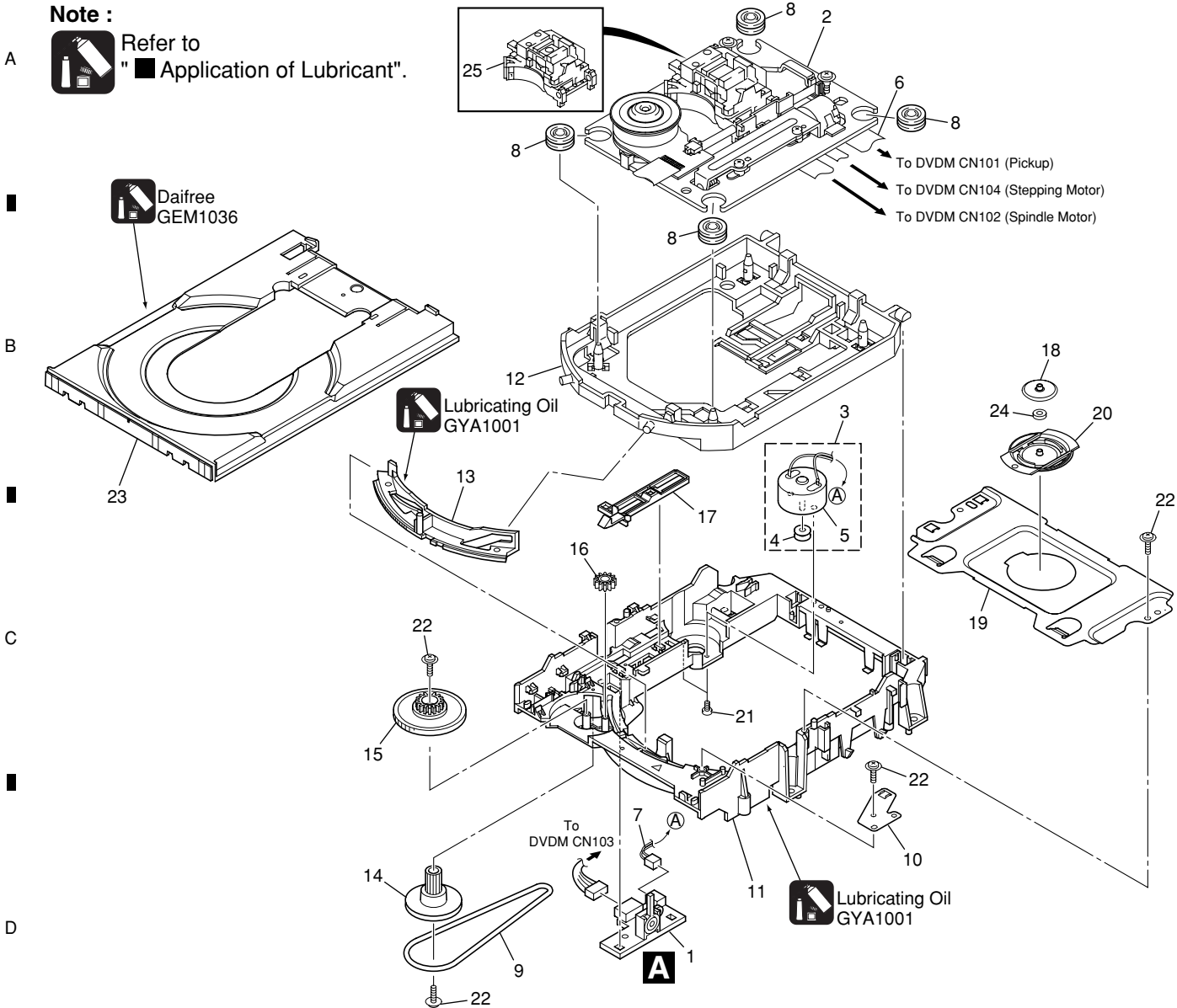
FRONT PANEL SECTION parts List (for DV-578A-S)

Mark No.	Description	Part No.	
1	FLKY Assy	VWG2494	
2	PWSB Assy	VWG2495	A
3	Front Panel	VNK5540	
4	Rubber Foot	VEB1349	
5	FL Lens	VNK5543	
6	Pioneer Name Plate	VAM1129	
7	Main Key	VNK5541	■
8	LED Lens	VNK5544	
9	Menu Key	VNK5542	
10	Connector Assy (3P)	VKP2305	
NSP 11	FP Angle	VNE2307	B
12	Screw	PPZ30P080FNI	

			■
			C
			■
			D
			■
			E
			■
			F

2.6 04 LOADER ASSY

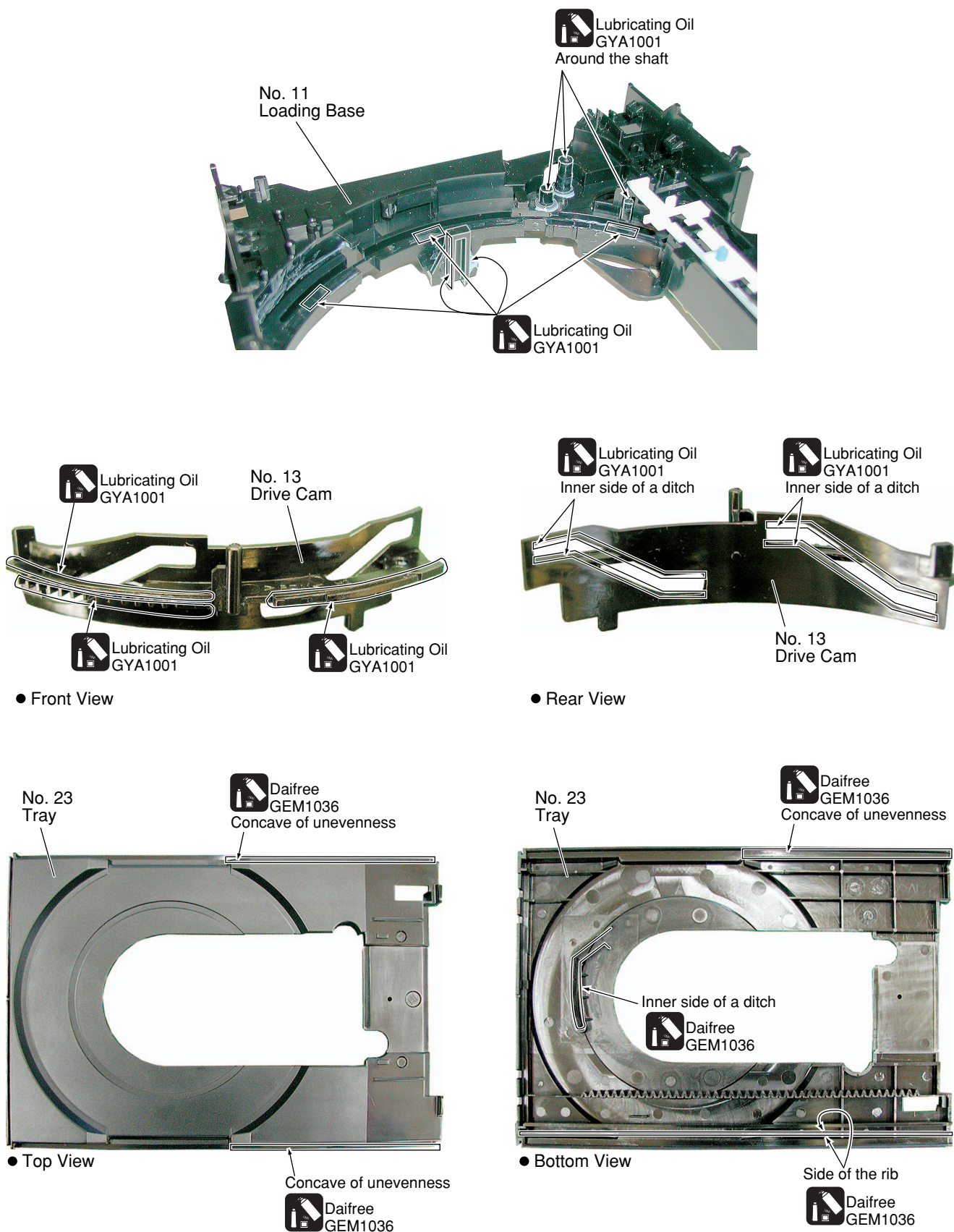
Note : Refer to "Application of Lubricant".



04 LOADER ASSY parts List

Mark No.	Description	Part No.	Mark No.	Description	Part No.
NSP 1	LOAB Assy	VWG2346	16	Drive Gear	VNL1923
2	Traverse Mecha. Assy-S	DXX2536	17	SW Lever	VNL1925
3	Loading Motor Assy	VXX2912	18	Clamper Plate 04	VNE2342
4	Motor Pulley	PNW1634	19	Bridge 04	VNE2343
NSP 5	Motor	VXM1107	20	Clamper 04	VNL1969
6	Flexible Cable (24P)	VDA1990	21	Screw	JGZ17P028FNI
7	Connector Assy 2P	VKP2325	22	Screw	VBA1093
8	Floating Rubber	VEB1351	23	Tray	VNL1920
9	Belt	VEB1358	24	Clamp Magnet	VMG1029
10	Stabilizer	VNE2253	25	03 SD Pickup Assy-S	OXX8005
11	Loading Base	VNL1917			
12	Float Base 04	VNL1968			
13	Drive Cam	VNL1919			
14	Gear Pulley	VNL1921			
15	Loading Gear	VNL1922			

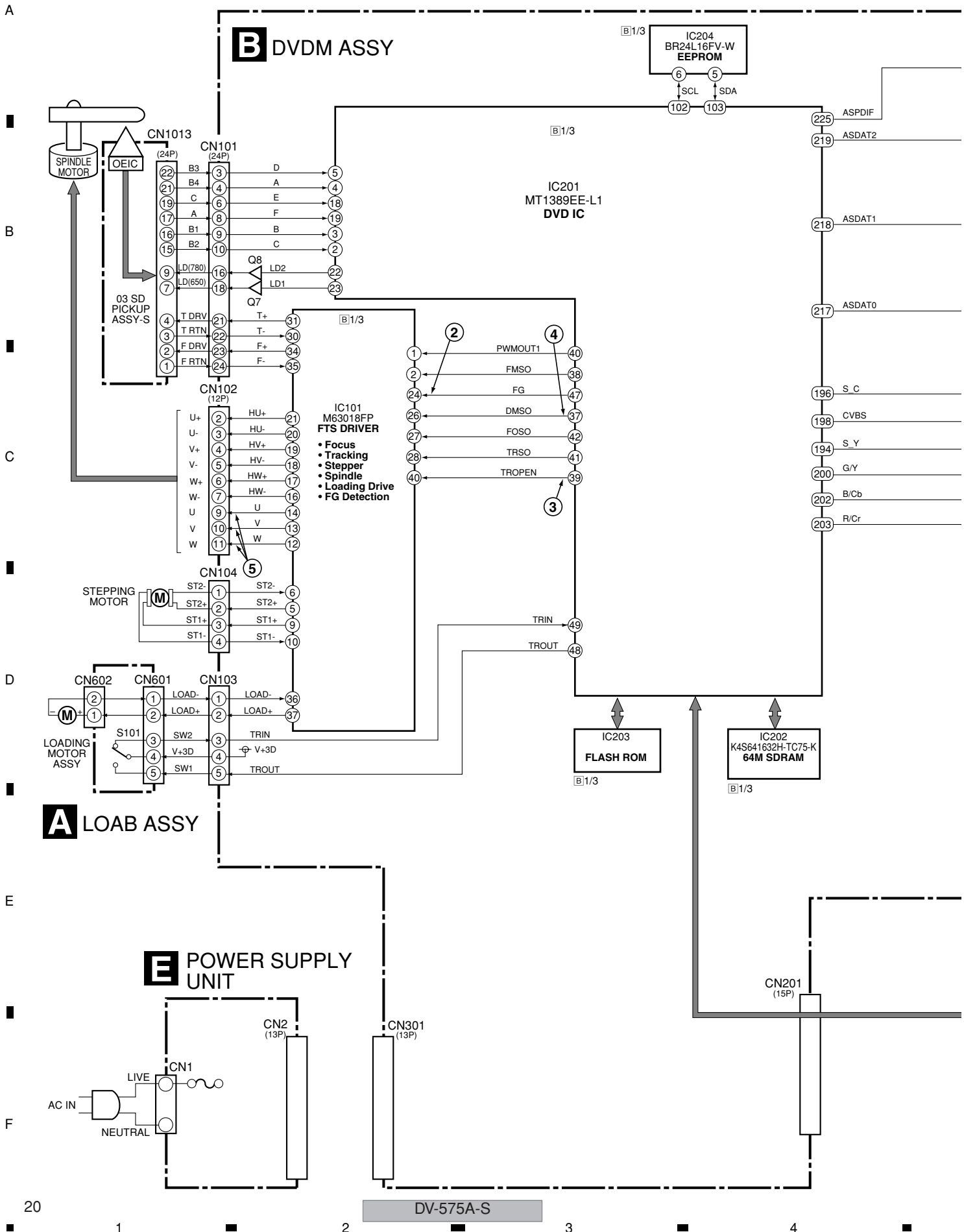
Application of Lubricant

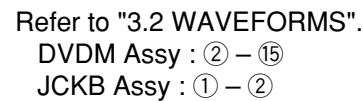


3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

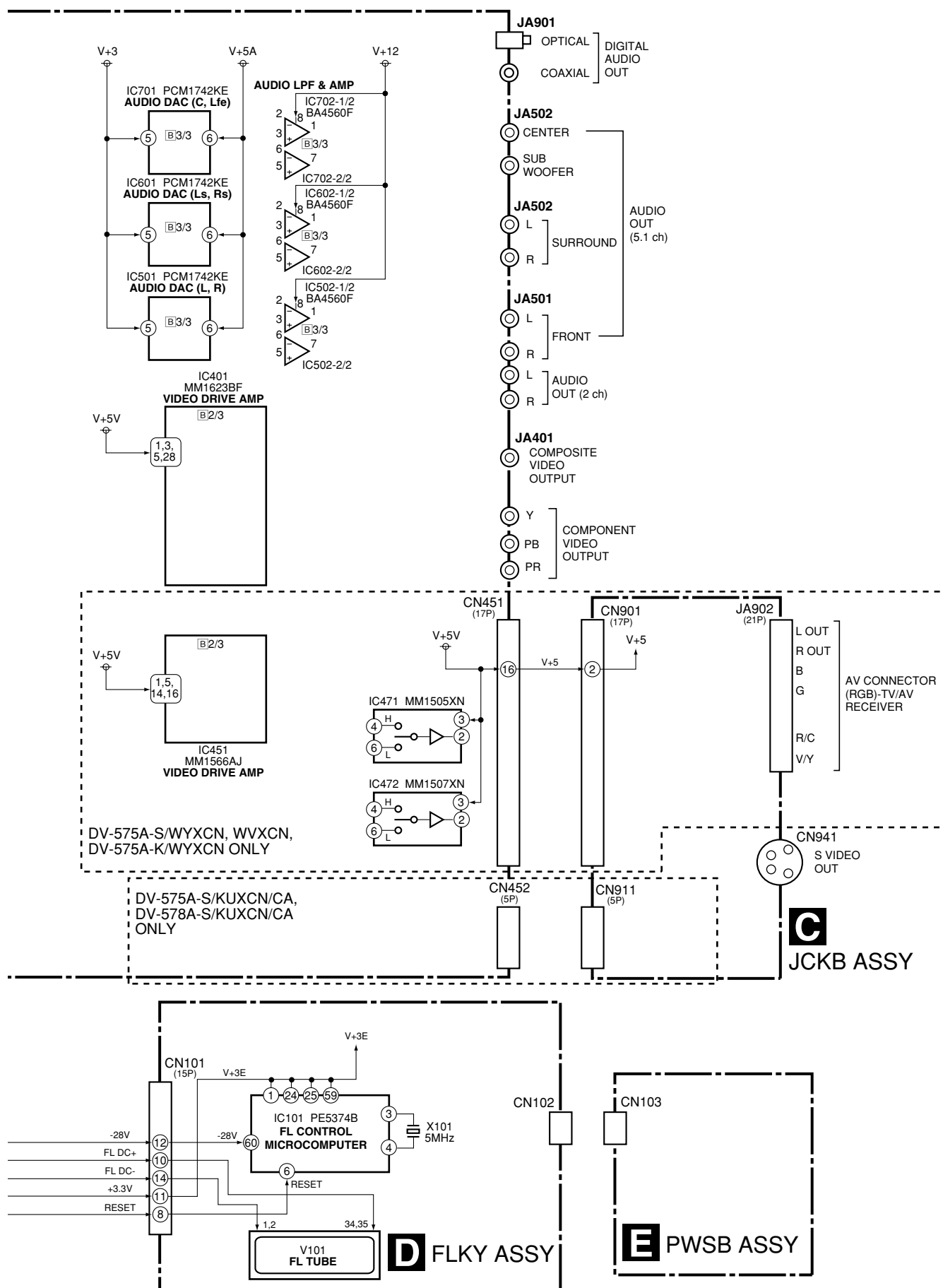
3.1.1 SIGNAL ROUTE BLOCK DIAGRAM





△





3.2 WAVEFORMS

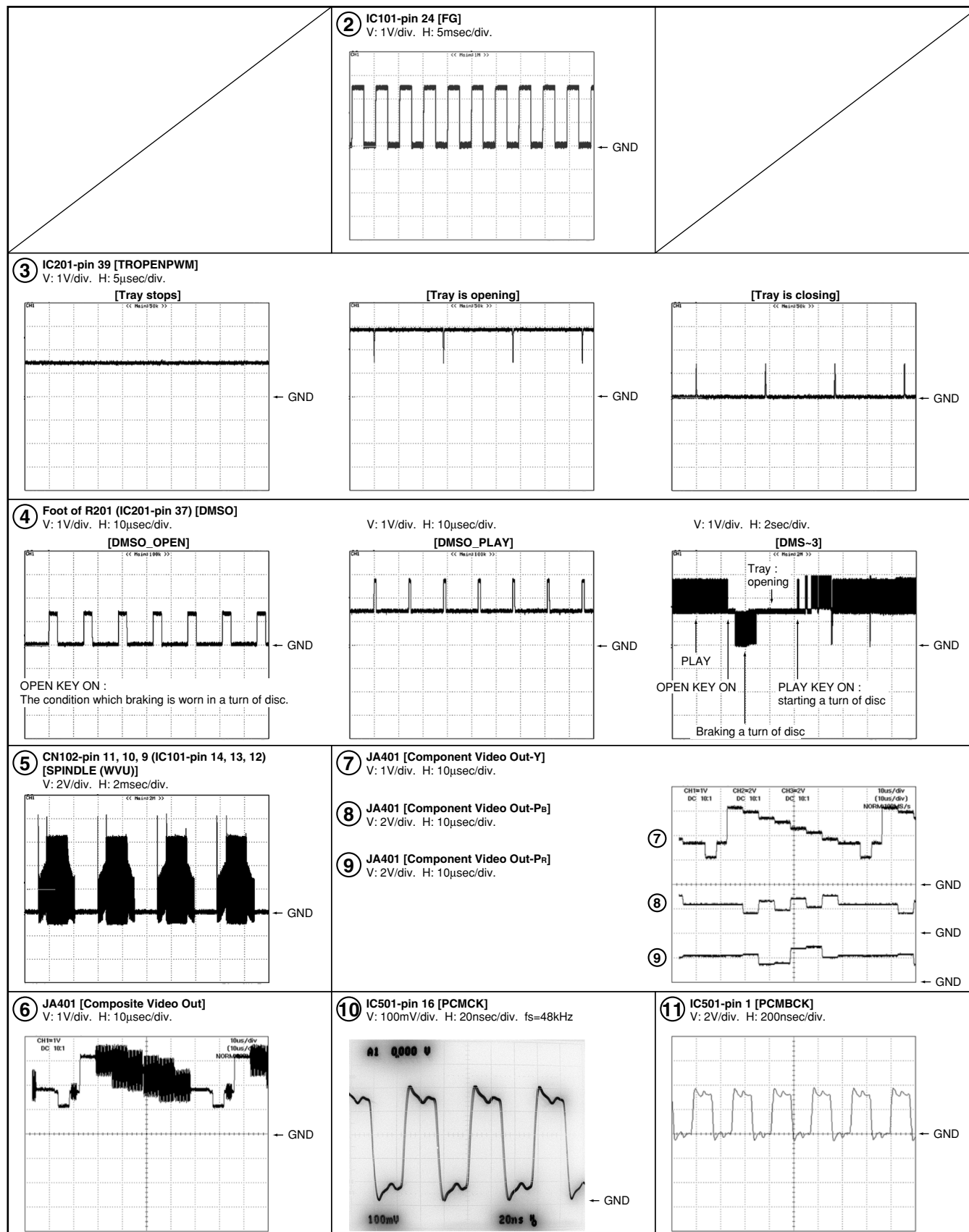
Note : The encircled numbers denote measuring point in the schematic diagram.

B DVDM ASSY

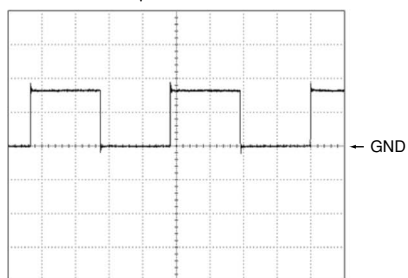
Measurement condition ;

No. 2 to 9 : reference A1 (DVD), T2-chp 19, Color-bar

No. 10 to 15 : reference A1 (DVD), T2-chp 1



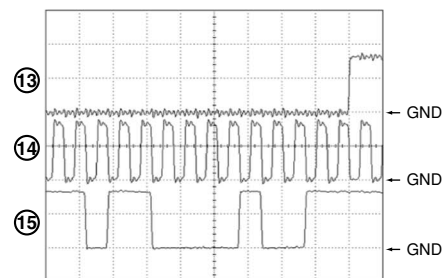
⑫ IC501-pin 3 [PCMLRCK]
V: 2V/div. H: 5μsec/div.



⑬ IC501-pin 3 [PCMLRCK]
V: 2V/div. H: 500nsec/div.

⑭ IC501-pin 1 [PCMBCK]
V: 2V/div. H: 500nsec/div.

⑮ IC501-pin 2 [PCMDATA]
V: 2V/div. H: 500nsec/div.



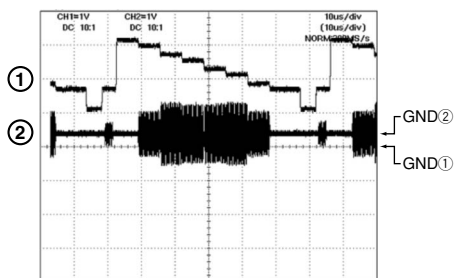
C JCKB ASSY

Measurement condition :

reference A1 (DVD), T2-chp 19, Color-bar



① CN941 [S Video Out-Y]
V: 1V/div. H: 10μsec/div.




② CN941 [S Video Out-C]
V: 1V/div. H: 10μsec/div.

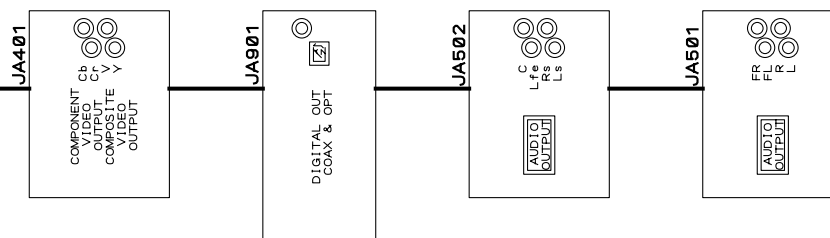


4



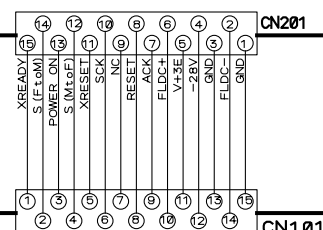
- When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".
- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
-  : The power supply is shown with the marked box.

(RF)  : RF SIGNAL ROUTE
 (F)  : FOCUS SERVO LOOP LINE
 (T)  : TRACKING SERVO LOOP LINE



B DVDM ASSY
 (DV-575A-S/KUXCN/CA, DV-578A-S/KUXCN/CA : VWS1582)
 (DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWS1583)

B 1/3 : DVD IC BLOCK
B 2/3 : POWER and VIDEO BLOCK
B 3/3 : AUDIO BLOCK



D FLKY ASSY
 (DV-575A-S/KUXCN/CA : VWG2483)
 (DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWG2484)
 (DV-578A-S/KUXCN/CA : VWG2494)

3.4 DVDM ASSY (1/3)

B 1/3 DVDM ASSY (DV-575A-S/KUXCN/CA, DV-578A-S/KUXCN/CA : VWS1582) (DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWS1583)

A

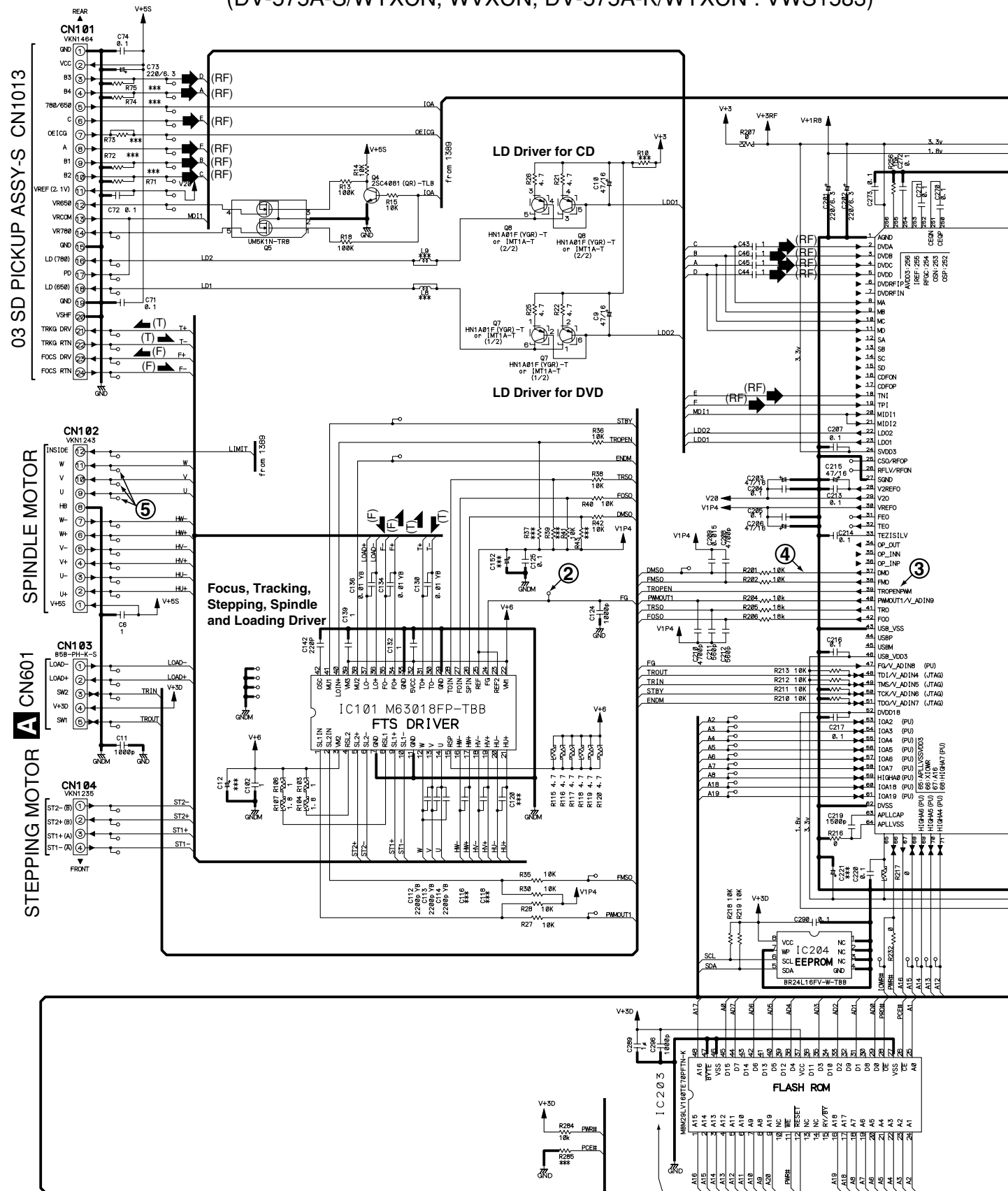
B

C

D

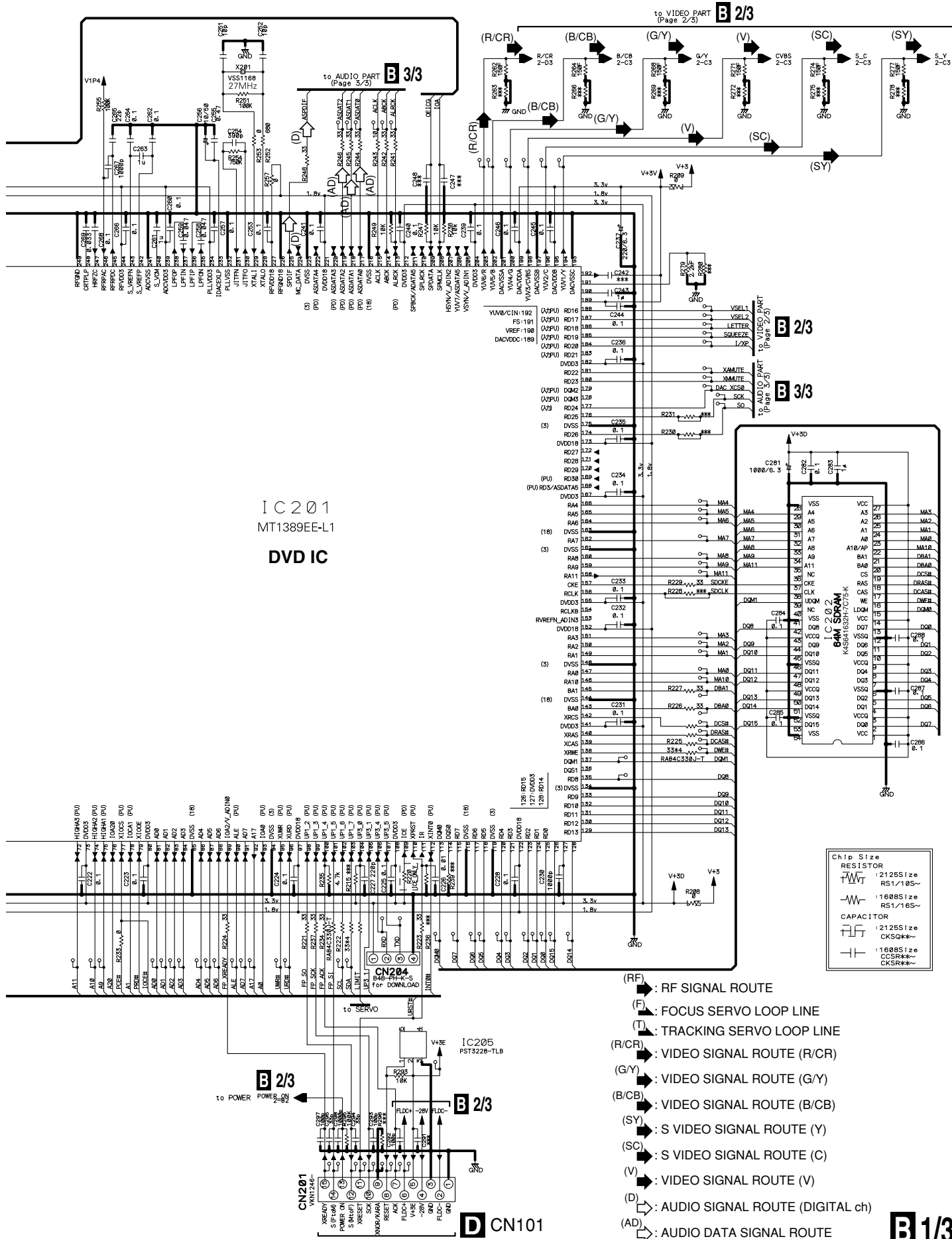
E

F



B 1/3

DV-575A-S/KUXCN/CA, DV-578A-S/KUXCN/CA : VYW2202
DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VYW2164



A

B

C

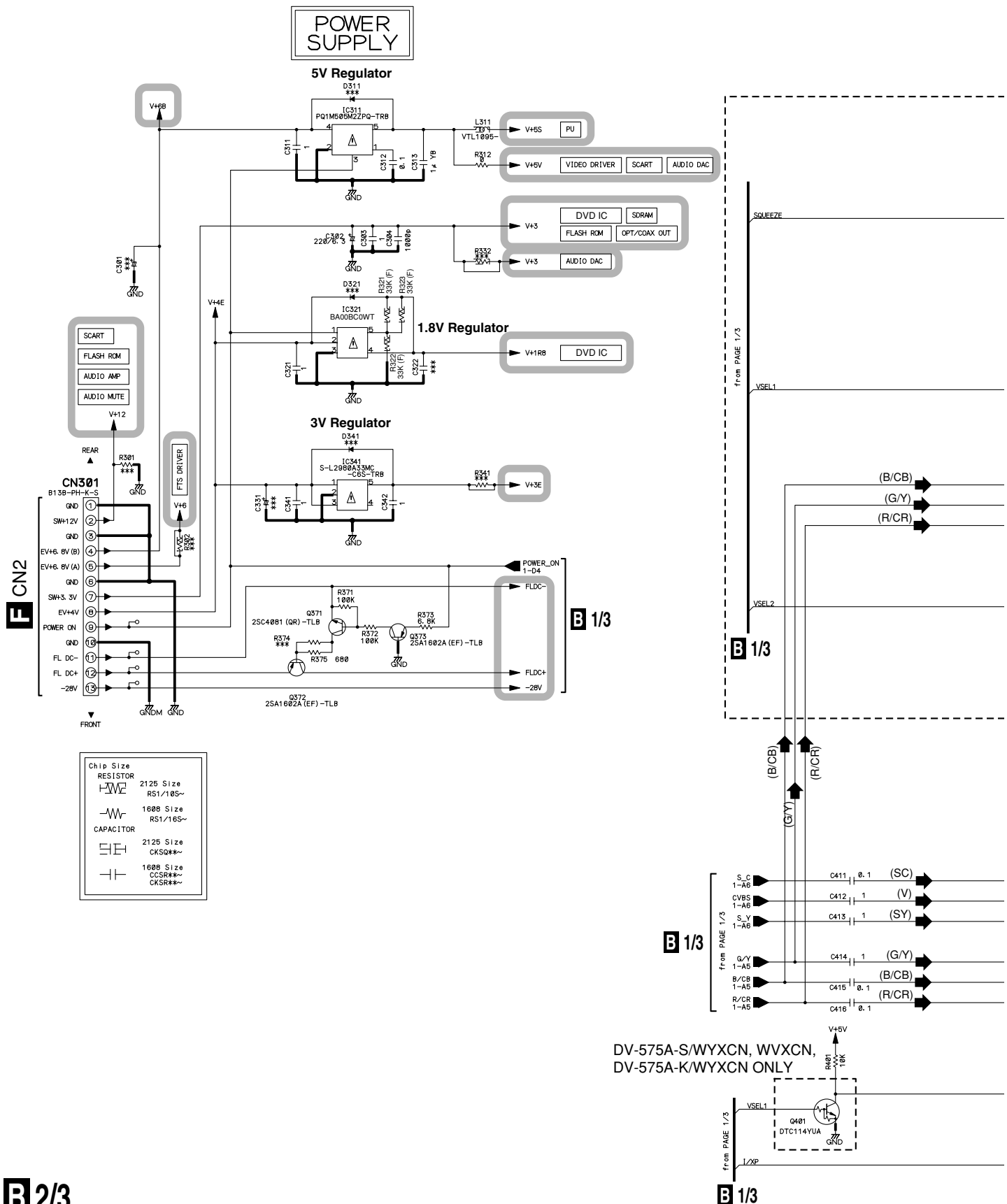
D

E

F

3.5 DVDM ASSY (2/3)

B 2/3 DVDM ASSY (DV-575A-S/KUXCN/CA, DV-578A-S/KUXCN/CA : VWS1582)
(DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWS1583)



B 2/3

4

A



32

33

3.7 JCKB ASSY

C JCKB ASSY (DV-575A-S/KUXCN/CA, DV-578A-S/KUXCN/CA : VWV1994)
(DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWV1995)

DV-575A-S/WYXCN, WVXCN,
DV-575A-K/WYXCN ONLY

CN901
HLEM17S-1

GND (1)
V+5 (2)
AUD. R (3)
GND (4)
AUD. L (5)
GND (6)
B/Pb (7)
SQUEEZE (8)
G/Py (9)
GND (10)
R/C/Pr (11)
BLANK/IP (12)
V/Y (13)
ASPECT (14)
S_Y (15)
GND (16)
S_C (17)

B 2/3
CN451

CN911
HLEM5S-1 (SY)

V/Y (1)
ASPECT (2)
S_Y (3)
GND (4)
S_C (5)

B 2/3
CN452

DV-575A-S/KUXCN/CA,
DV-578A-S/KUXCN/CA
ONLY

Chip Size	
RESISTOR	
	: 2125Size RS1/10S~
	: 1600Size RS1/16S~
CAPACITOR	
	: 2125Size CKSQ**~
	: 1600Size CKSR**~

KN901

(VNE1948-)

R989 ***
R990 ***
R991 ***
R992 ***
R993 ***
R994 ***
R995 ***
R996 ***
R997 ***

GND GND GND

DV-575A-S

(R/CR) → VIDEO SIGNAL ROUTE (R/CR)

(FL) → AUDIO SIGNAL ROUTE (Front L ch)

(G/Y) → VIDEO SIGNAL ROUTE (G/Y)

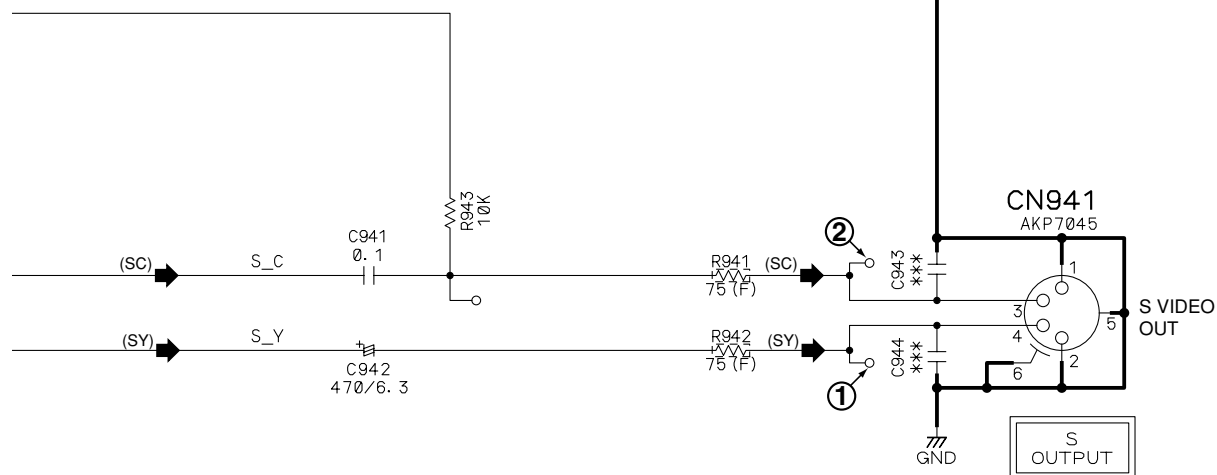
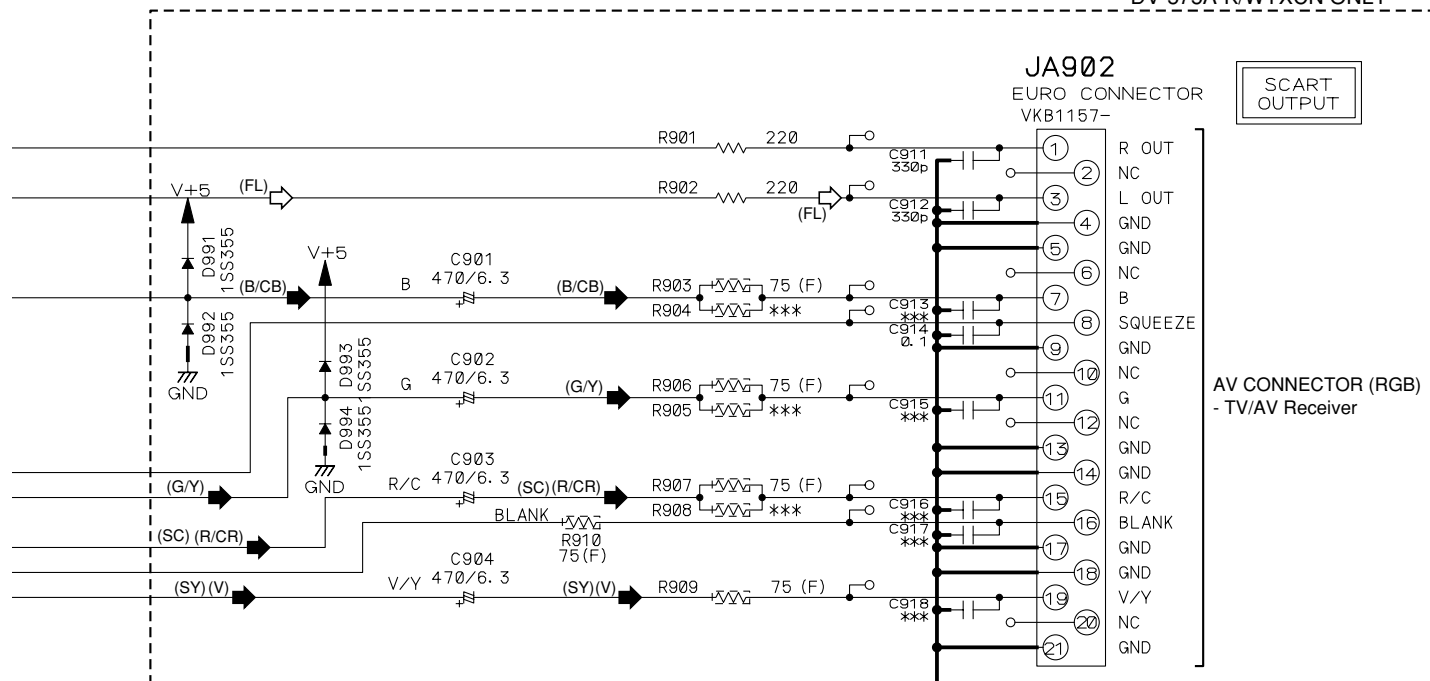
(B/CB) → VIDEO SIGNAL ROUTE (B/CB)

(SY) → S VIDEO SIGNAL ROUTE (Y)

(SC) → S VIDEO SIGNAL ROUTE (C)

(V) → VIDEO SIGNAL ROUTE (V)

DV-575A-S/WYXCN, WVXCN,
DV-575A-K/WYXCN ONLY



3.8 FLKY and PWSB ASSYS (for DV-575A-S and DV-575A-K)

D FLKY ASSY (DV-575A-S/KUXCN/CA : VWG2483) (DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN : VWG2484)

A

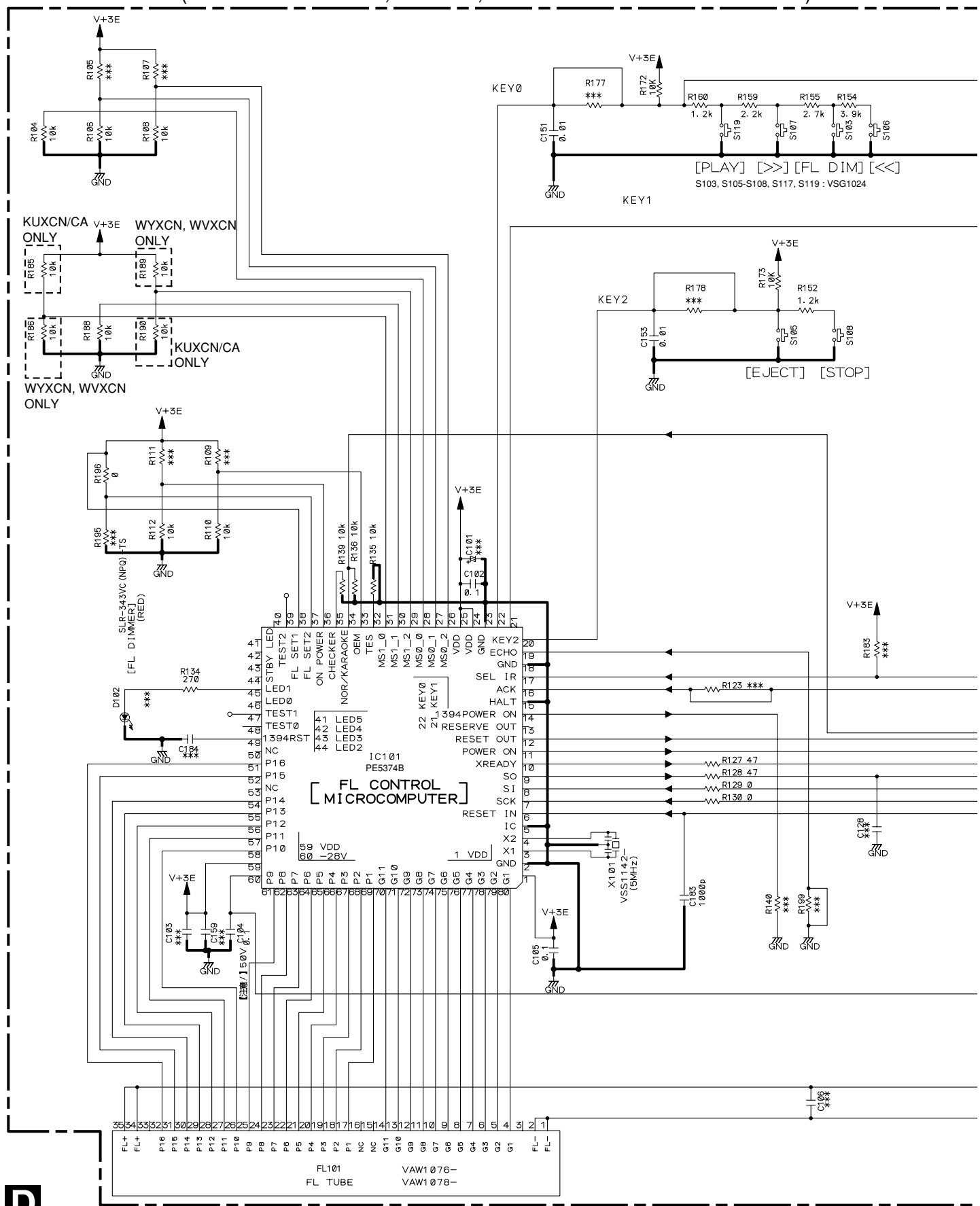
B

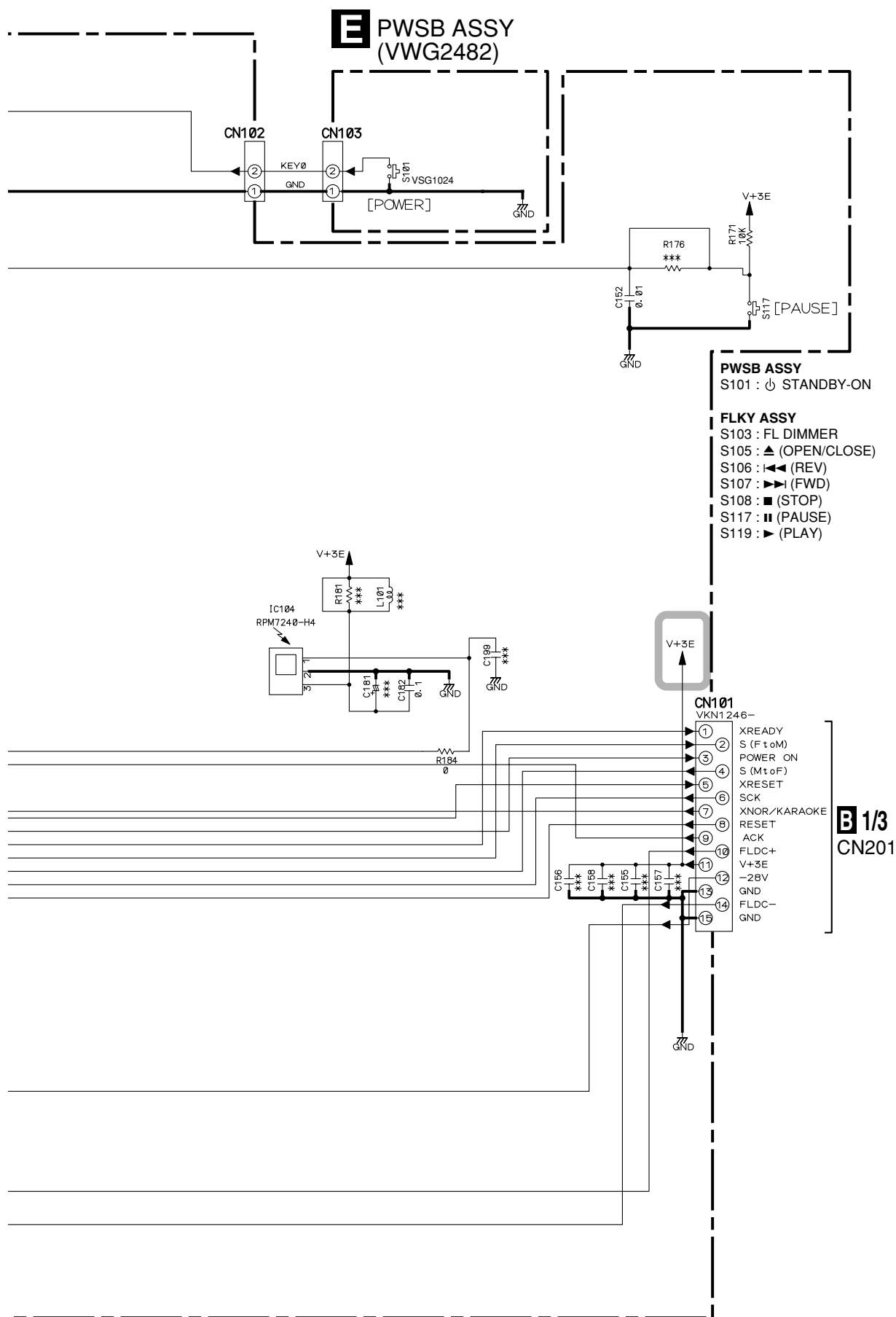
C

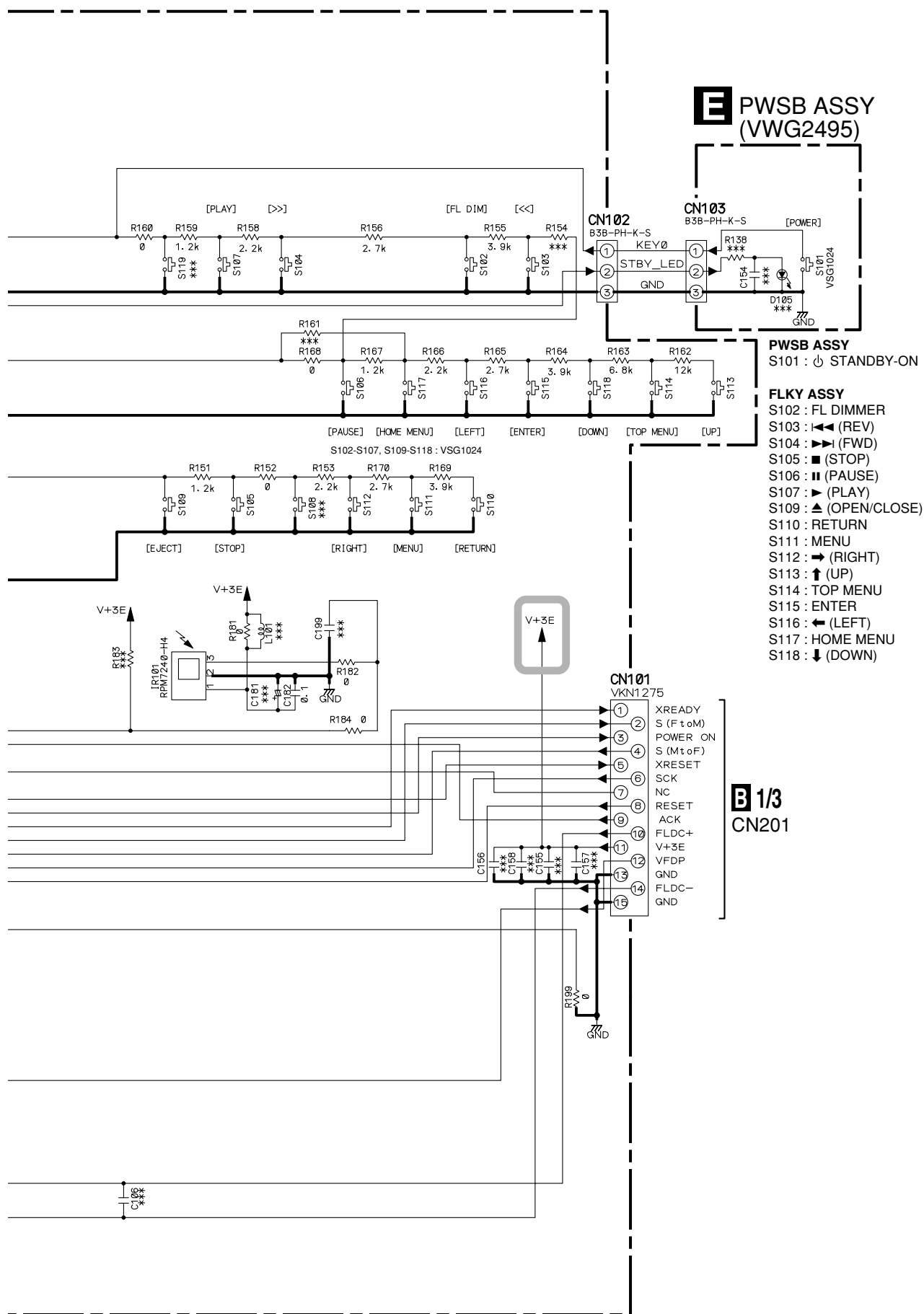
D

E

F







W



NO

- In
- Ple
- Ple



4. PCB CONNECTION DIAGRAM

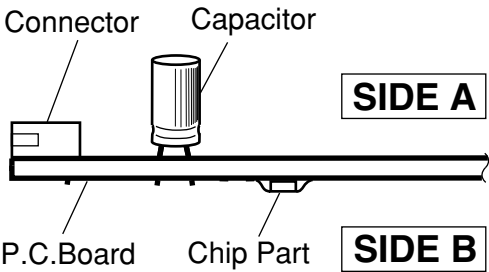
4.1 LOAB ASSY

NOTE FOR PCB DIAGRAMS :

- Part numbers in PCB diagrams match those in the schematic diagrams.
- A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol In PCB Diagrams	Symbol In Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

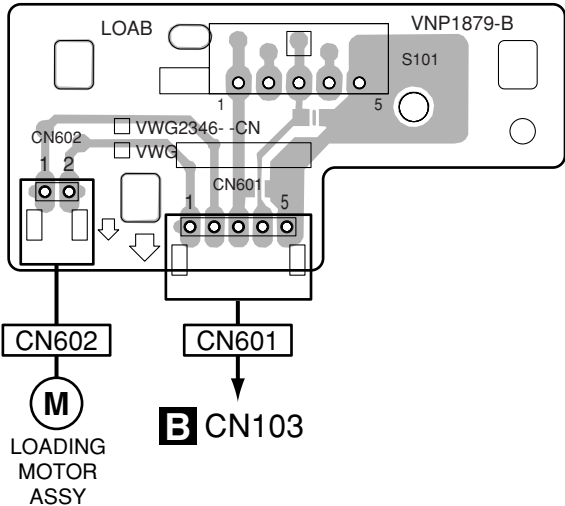
- The parts mounted on this PCB include all necessary parts for several destinations.
- For further information for respective destinations, be sure to check with the schematic diagram.
- View point of PCB diagrams.



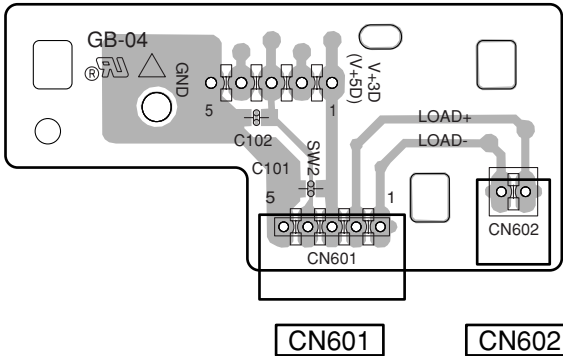
SIDE A

SIDE B

A LOAB ASSY (VNP1879-B)



A LOAB ASSY (VNP1879-B)



A

A

△

F

(VNP1966-D)



IC202 IC201 IC341

4

SIDE A

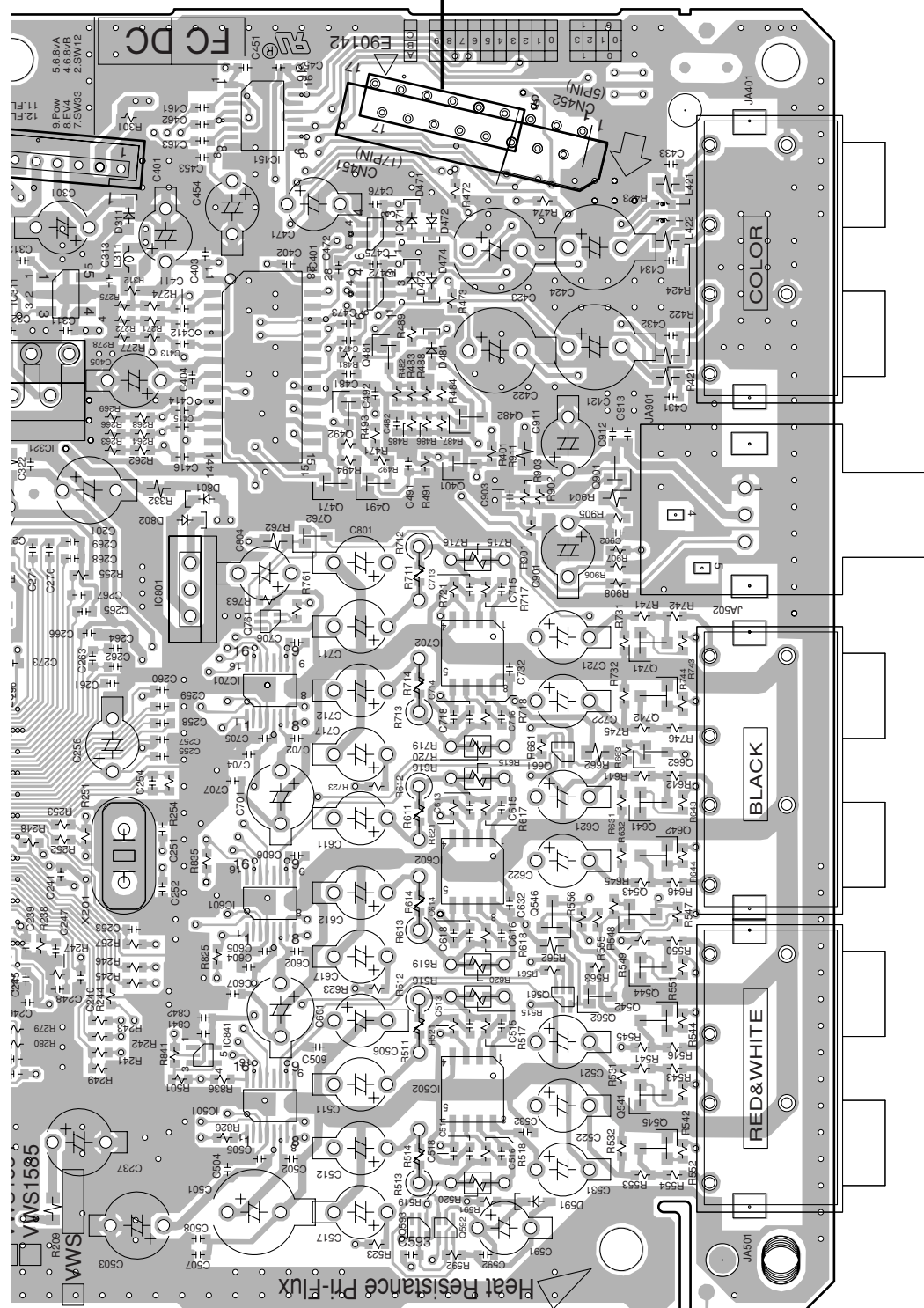
A

 $\sqrt{2}$

C CN901 or CN911

1

CN451	CN452
-------	-------



IC311		IC451	IC471	Q482	Q661	Q901	Q741
IC321	IC801	IC401	IC472	Q401	Q546		Q742
	IC841	Q761	Q481	IC702			Q662
		IC701	Q492	IC602	Q561	Q562	Q641
		IC601	Q471	Q491	IC502		Q642
		IC501	Q762	Q593	Q592		Q541-Q545

B

C

D

E

F

B

43

SIDE B

A

B

C

D

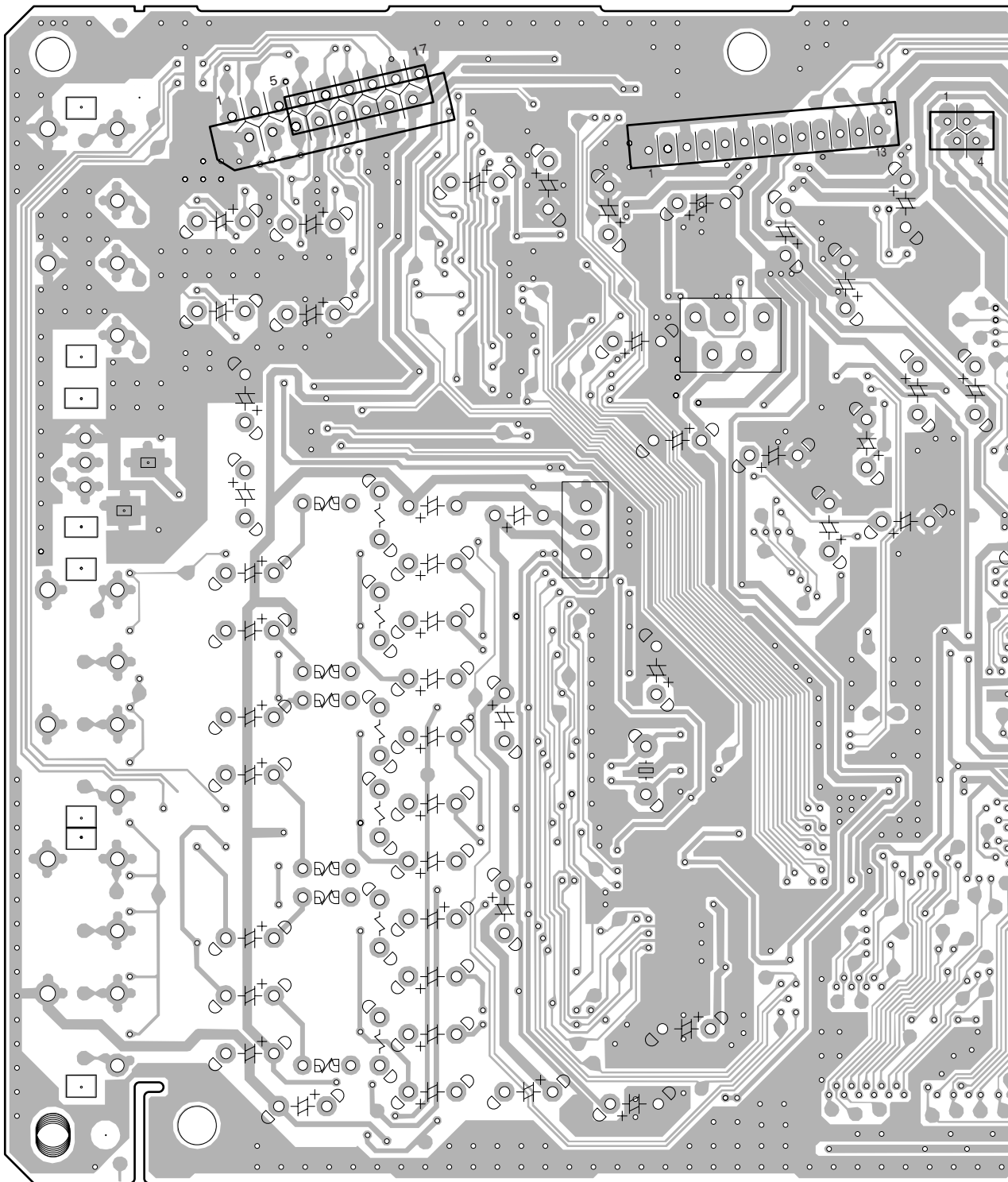
E

F

CN451 CN452

CN301

CN104



B

SIDE B

A

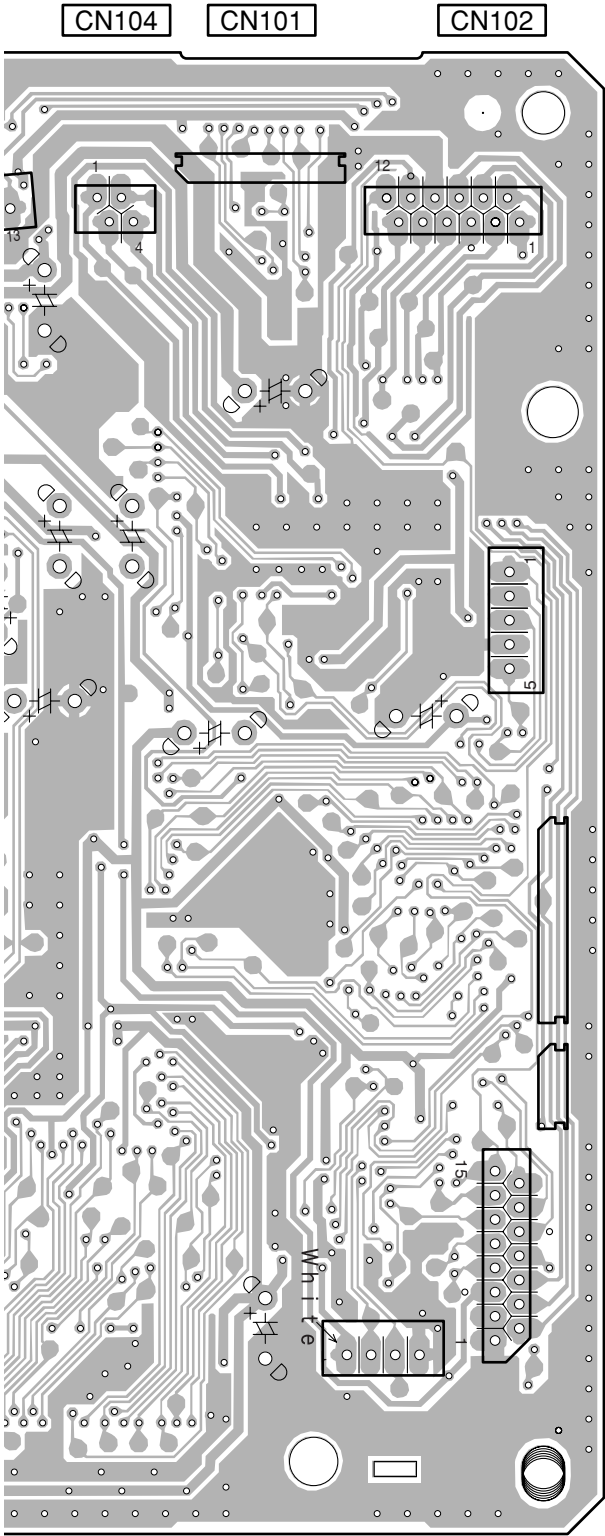
B

C

D

E

F



B DVDM ASSY
(VNP1966-D)

CN103

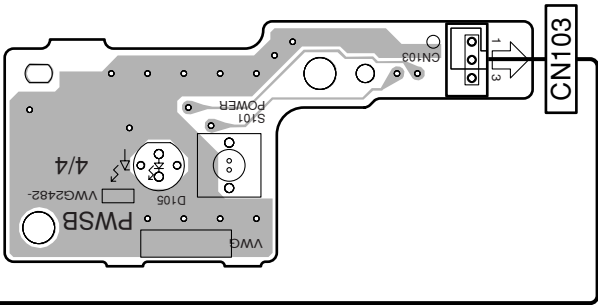
CN201

B

4.3 FLKY and PWSB ASSYS (for DV-575A-S and DV-575A-K)

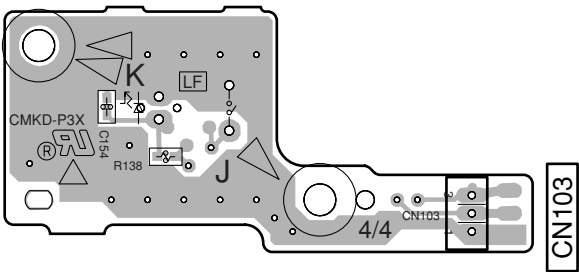
SIDE A

E
PWSB ASSY
(VNP1956-B)



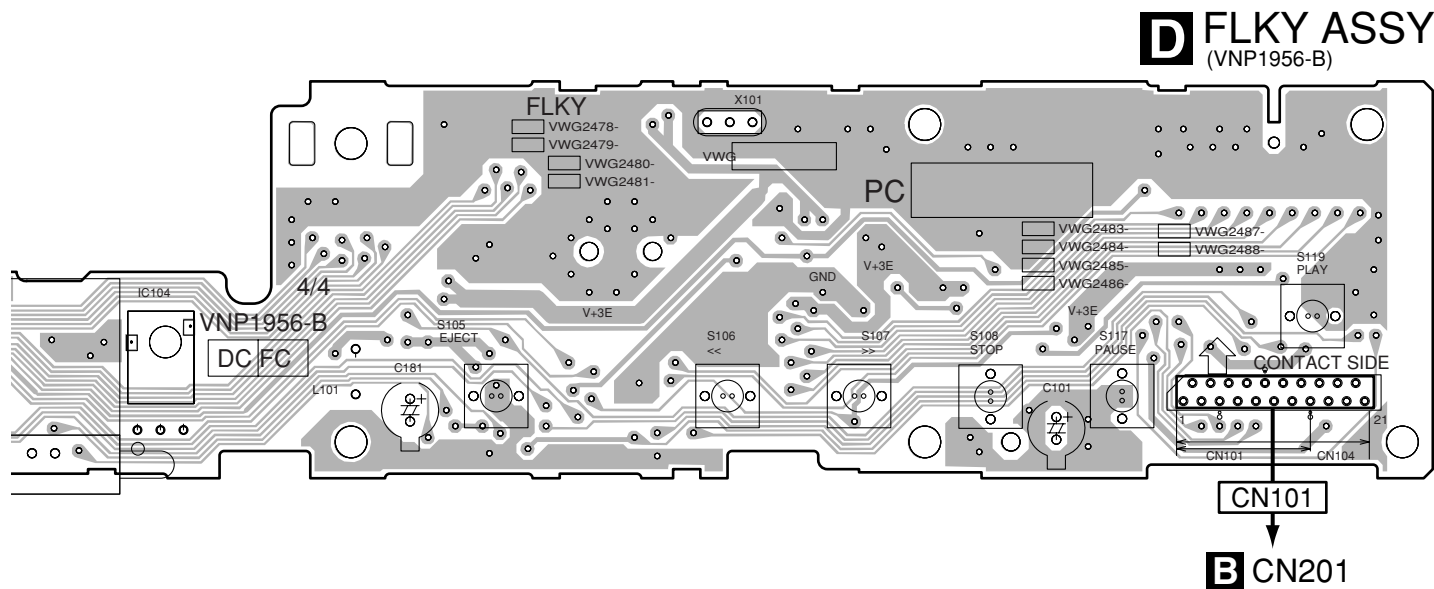
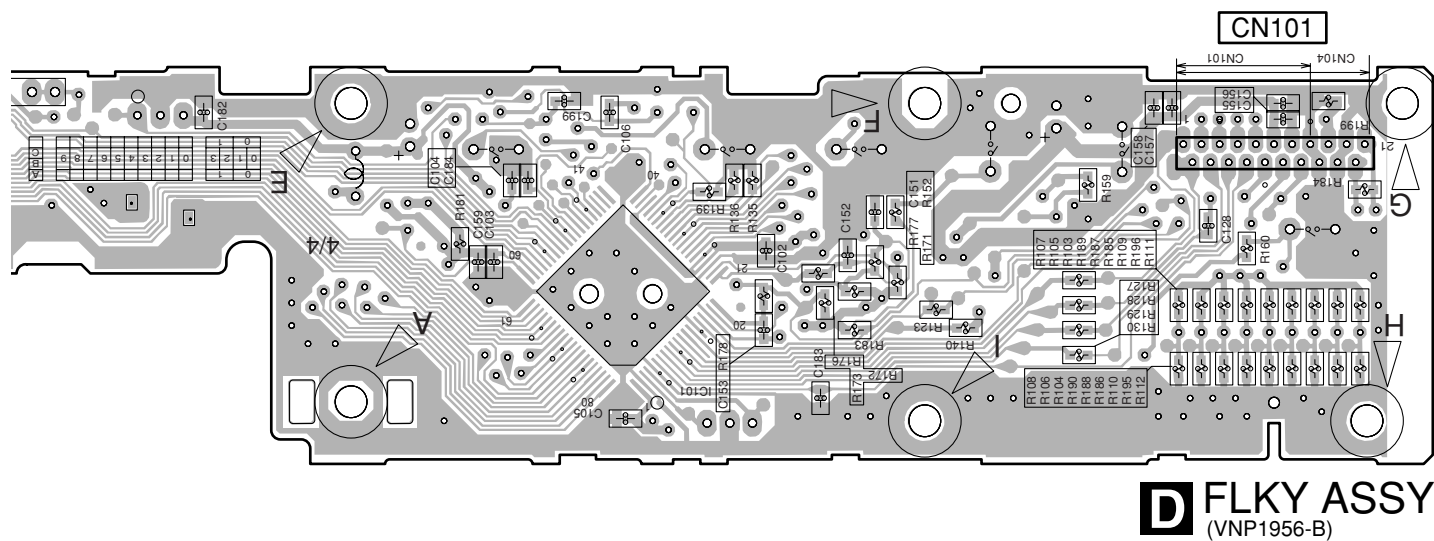
SIDE B

E
PWSB ASSY
(VNP1956-B)



SIDE A

A

**SIDE B**

D

F

E

D

47

A

B



C

D



E

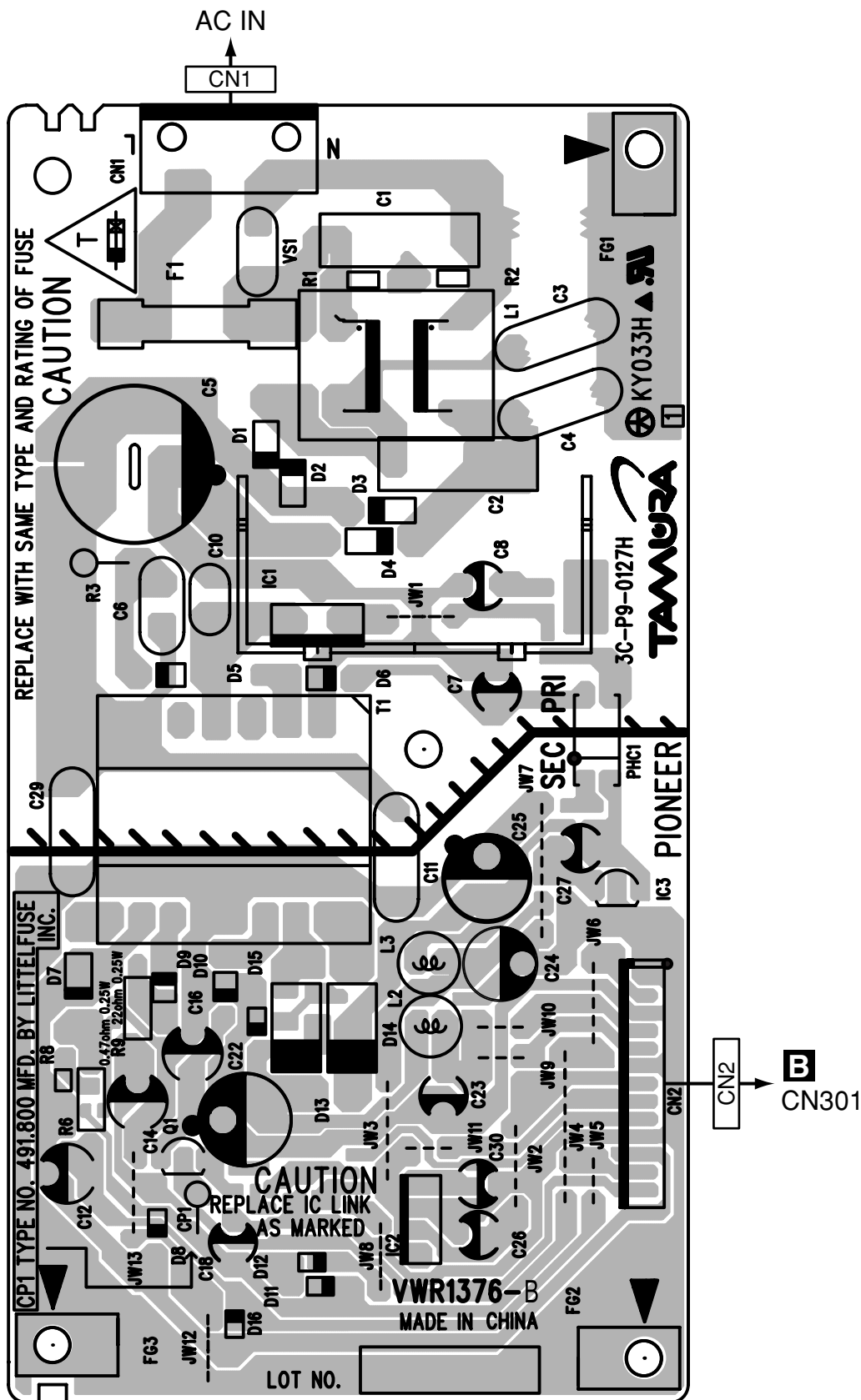
F

4.5 POWER SUPPLY UNIT (VWR1376)

SIDE A

SIDE A

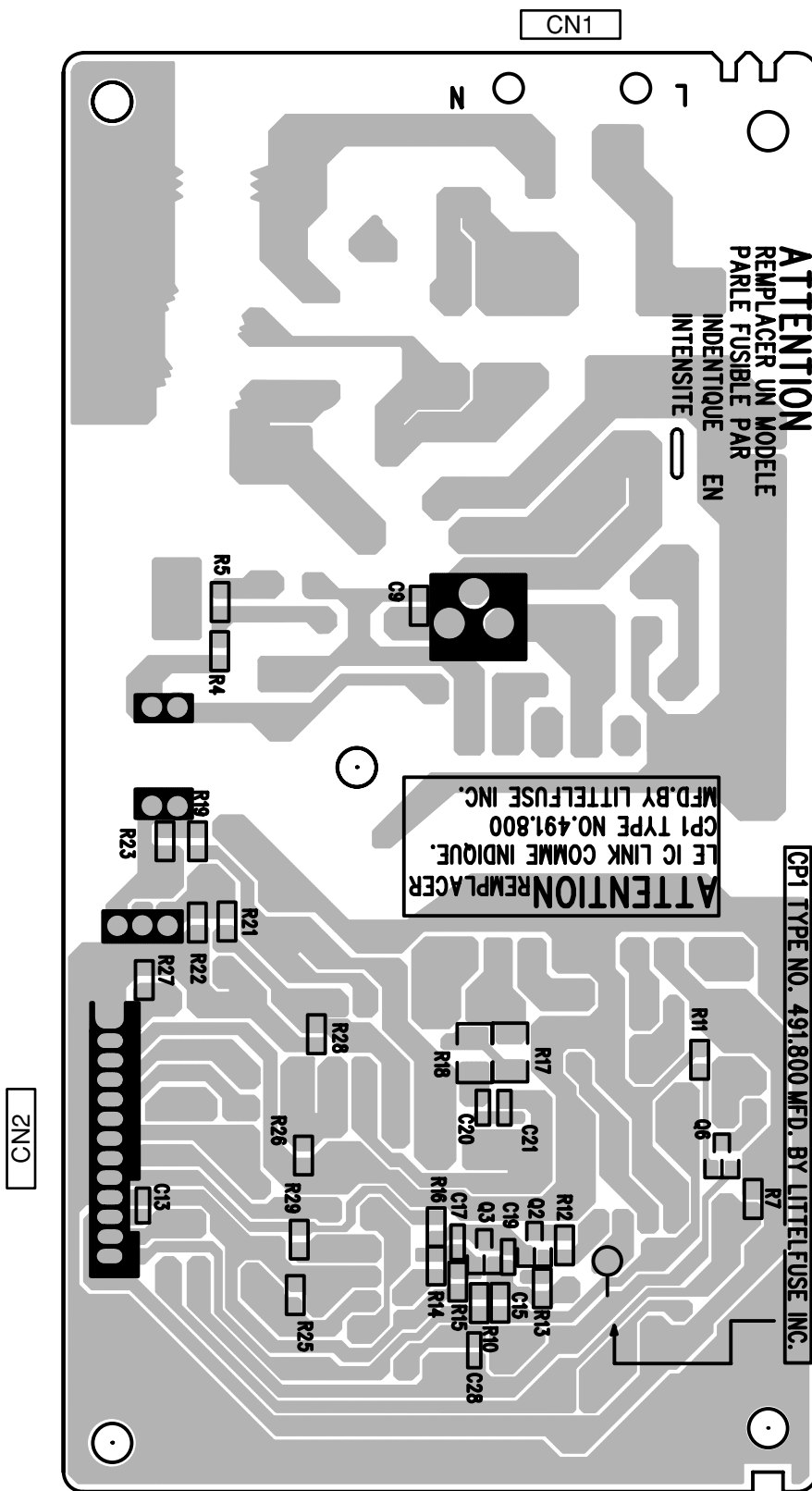
POWER SUPPLY UNIT



SIDE B

SIDE B

F POWER SUPPLY UNIT



F

F

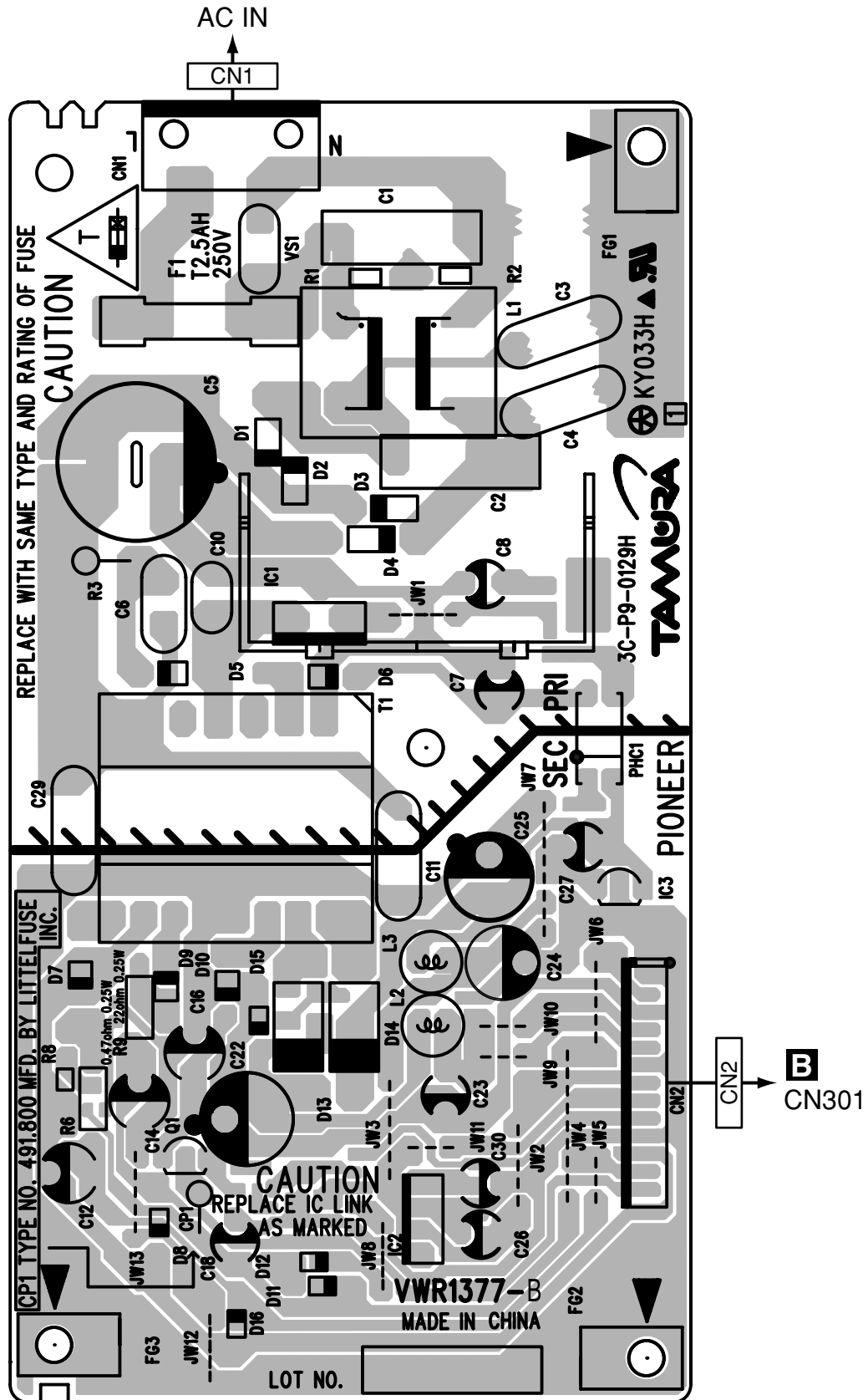
DV-575A-S

4.6 POWER SUPPLY UNIT (VWR1377)

SIDE A

SIDE A

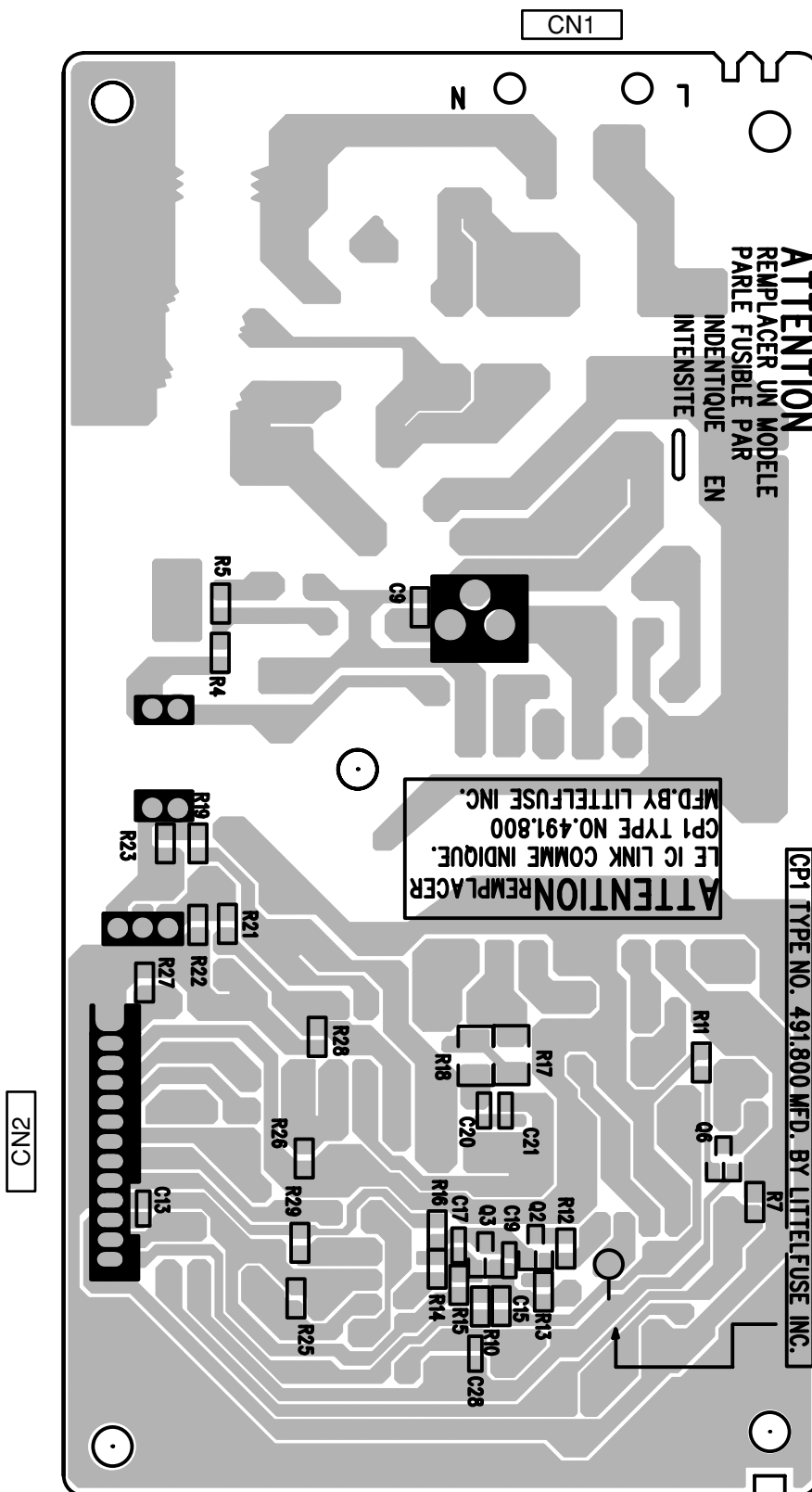
F POWER SUPPLY UNIT



SIDE B

SIDE B

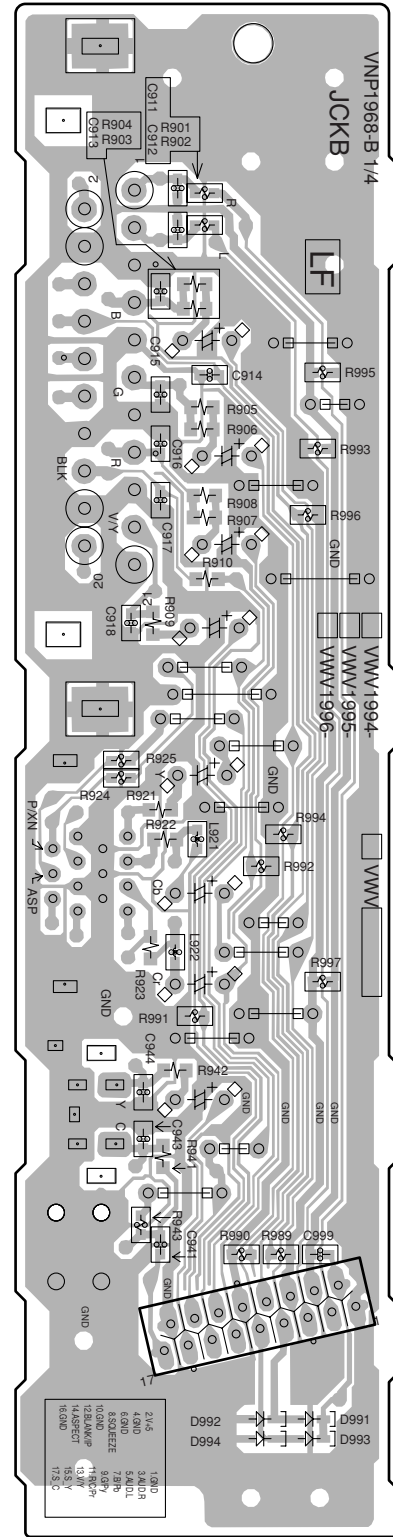
F POWER SUPPLY UNIT



4

SIDE B

C JCKB ASSY
(VNP1968-B)



CN901	CN911
-------	-------

C

C

5. PCB PARTS LIST

NOTES: ●Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.

●The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

●When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560 Ω → 56 x 10¹ → 561 RD1/4PU 561J
 47k Ω → 47 x 10³ → 473 RD1/4PU 473J
 0.5 Ω → R50 RN2H R50K
 1 Ω → 1R0 RS1P 1R0K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 x 10¹ → 5621 RN1/4PC 5621F

Mark No. Description Part No.

LIST OF ASSEMBLIES

[DV-575A-S/KUXCN/CA]

NSP 1..04 LOADER ASSY VWT1210
 NSP 2..LOAB ASSY VWG2346

1..DVDM ASSY VWS1582

1..JCKB ASSY VVV1994

NSP 1..FLKB ASSY VWM2247
 2..FLKY ASSY VWG2483
 2..PWSB ASSY VWG2482

⚠ 1..POWER SUPPLY UNIT VWR1376

[DV-575A-S/WYXCN, WVXCN, DV-575A-K/WYXCN]

NSP 1..04 LOADER ASSY VWT1210
 NSP 2..LOAB ASSY VWG2346

1..DVDM ASSY VWS1583

1..JCKB ASSY VVV1995

NSP 1..FLKB ASSY WM2248
 2..FLKY ASSY VWG2484
 2..PWSB ASSY VWG2482

⚠ 1..POWER SUPPLY UNIT VWR1377

[DV-578A-S/KUXCN/CA]

NSP 1..04 LOADER ASSY VWT1210
 NSP 2..LOAB ASSY VWG2346

1..DVDM ASSY VWS1582

1..JCKB ASSY VVV1994

NSP 1..FLKB ASSY VWM2260
 2..FLKY ASSY VWG2494
 2..PWSB ASSY VWG2495

⚠ 1..POWER SUPPLY UNIT VWR1376

Mark No. Description Part No.

A LOAB ASSY [VWG2346] SWITCHES AND RELAYS

S101 VSK1011

OTHERS

CN602 KR CONNECTOR S2B-PH-K
 CN601 KR CONNECTOR S5B-PH-K
 PC BOARD LOAB VNP1879

B DVDM ASSY [VWS1582] SEMICONDUCTORS

⚠ IC321 BA00BC0WT
 IC502,IC602,IC702 BA4560F
 IC204 BR24L16FV-W
 IC202 K4S641632H-TC75
 IC101 M63018FP

IC401 MM1623BF
 IC201 MT1389EE-L1
 ⚠ IC801 NJM78M05FA
 IC501,IC601,IC701 PCM1742KE
 ⚠ IC311 PQ1M505M2SPQ

IC205 PST3228
 ⚠ IC341 S-L2980A33MC-C6S
 IC841 TC7SHU04FU
 IC203 VYW2202
 Q562,Q662,Q762 2SA1576A

Q372,Q373 2SA1602A
 Q371,Q4,Q901 2SC4081
 Q541,Q542,Q544,Q545 2SD2114K
 Q641,Q642,Q741,Q742 2SD2114K
 Q7,Q8 HN1A01F

Q592,Q593 HN1C01FU
 Q5 UM5K1N
 Q561,Q661,Q761 UMH9N
 D801 1SS355
 D591 UDZS6.8B

COILS AND FILTERS

L421,L422 CHIP BEAD VTL1089
 L311 CHIP BEAD VTL1095

CAPACITORS

C292,C293,C297 CCSRCH101J50
 C265 CCSRCH220J50
 C142,C227 CCSRCH221J50
 C294,C295,C903 CCSRCH330J50

Mark No. Description**Part No.****Mark No. Description****Part No.**

C507,C515,C516,C607

CCSRCH331J50

R115-R120

RS1/10S4R7J

C615,C616,C707,C715,C716

CCSRCH331J50

R421-R424

RS1/10S75R0F

C254

CCSRCH391J50

R262,R264,R268,R271,R274

RS1/16S1500F

C211,C212

CCSRCH561J50

R277

RS1/16S1500F

C251

CCSRCH8R0D50

R279

RS1/16S2201F

C252

CCSRCH9R0D50

R321-R323

RS1/16S3302F

R905

RS1/16S75R0F

Other Resistors

RS1/16S###J

C256,C506

CEAT100M50

C401,C405,C511,C512,C517

CEAT101M10

C611,C612,C617,C711,C712

CEAT101M10

C717,C804,C911

CEAT101M10

C281,C421,C422,C501

CEAT102M6R3

OTHERS

CN301 KR CONNECTOR

B13B-PH-K

CN103 KR CONNECTOR

B5B-PH-K

CN452 FFC CONNECTOR 5P

HLEM5S-1

JA502 4P PIN JACK

VKB1126

JA501 4P PIN JACK

VKB1132

C901

CEAT1R0M50

C201,C202,C237,C302,C601

CEAT221M6R3

C701,C73

CEAT221M6R3

C10,C203,C206,C215

CEAT470M16

C521,C522,C531,C591

CEAT470M16

JA401 4P PIN JACK

VKB1168

CN104 4P FFC CONNECTOR

VKN1235

CN102 12P FFC CONNECTOR

VKN1243

CN201 15P FFC CONNECTOR

VKN1246

CN101 24P FFC CONNECTOR

VKN1464

C621,C622,C721,C722,C801

CEAT470M16

C9

CEAT470M16

C423,C424

CEAT471M6R3

C11,C124,C230,C267,C296

CKSRYB102K50

C298,C304,C505,C913

CKSRYB102K50

JA901 JACK

VKX1013

X201 CRYSTAL RESONATOR
(27MHz)

VSS1168

C130,C134,C136,C226

CKSRYB103K50

C313,C606,C706

CKSRYB105K10

C219

CKSRYB152K50

C209

CKSRYB153K25

C112-C114,C513,C514

CKSRYB222K50

B DVDMM ASSY [VWS1583]**SEMICONDUCTORS**

⚠ IC321

BA00BC0WT

IC502,IC602,IC702

BA4560F

IC204

BR24L16FV-W

IC202

K4S641632H-TC75

IC101

M63018FP

C613,C614,C713,C714

CKSRYB222K50

C269

CKSRYB333K16

C208,C210

CKSRYB472K50

C258,C259

CKSRYB473K50

C255

CKSRYB474K10

IC471

MM1505XN

IC472

MM1507XN

IC451

MM1566AJ

IC401

MM1623BF

IC201

MT1389EE-L1

C125,C204,C205,C207

CKSRYF104Z25

C213,C214,C216,C217,C220

CKSRYF104Z25

C222-C225,C228,C231-C236

CKSRYF104Z25

C239-C241,C244-C246,C253

CKSRYF104Z25

C257,C260,C262,C264,C266

CKSRYF104Z25

⚠ IC801

NJM78M05FA

IC501,IC601,IC701

PCM1742KE

⚠ IC311

PQ1M505M2SPQ

IC205

PST3228

⚠ IC341

S-L2980A33MC-C6S

C268,C270-C273,C282

CKSRYF104Z25

C284-C288,C290,C312,C402

CKSRYF104Z25

C404,C411,C415,C416,C502

CKSRYF104Z25

C532,C602,C605,C632,C702

CKSRYF104Z25

C705,C71,C72,C732,C74

CKSRYF104Z25

IC841

TC7SHU04FU

IC203

VYW2202

Q482,Q492,Q562,Q662,Q762

2SA1576A

Q372,Q373

2SA1602A

Q371,Q4,Q481,Q491,Q901

2SC4081

C102,C132,C139,C243,C261

CKSRYF105Z10

C263,C283,C289,C303,C311

CKSRYF105Z10

C321,C341,C342,C412-C414

CKSRYF105Z10

C43-C46,C504,C518

CKSRYF105Z10

C592,C593,C6,C618,C718

CKSRYF105Z10

Q541-Q546,Q641,Q642

2SD2114K

Q741,Q742

2SD2114K

Q401

DTC114YUA

Q7,Q8

HN1A01F

Q592,Q593

HN1C01FU

C841,C912

CKSRYF105Z10

RESISTORS

R222,R225

RAB4C330J

R515,R520,R615,R620,R715

RN1/16SE1002D

R720

RN1/16SE1002D

R511,R514,R611,R614,R711

RN1/16SE5601D

R714

RN1/16SE5601D

Q5

UM5K1N

Q561,Q661,Q761

UMH9N

D471-D474,D481,D801

1SS355

D591

UDZS6.8B

R207-R209,R217

RS1/10S0R0J

R904

RS1/10S151J

R562,R662,R762

RS1/10S182J

R103,R106

RS1/10S1R0J

R104,R107

RS1/10S1R8J

COILS AND FILTERS

L421,L422 CHIP BEAD

VTL1089

L311 CHIP BEAD

VTL1095

CAPACITORS

5	6	7	8		
Mark No.	Description	Part No.	Mark No.	Description	Part No.
C292,C293,C297 C265 C142,C227 C294,C295,C903 C507,C515,C516,C607	CCSRCH101J50 CCSRCH220J50 CCSRCH221J50 CCSRCH330J50 CCSRCH331J50	R207-R209,R217 R904 R562,R662,R762 R103,R106 R104,R107	RS1/10S0R0J RS1/10S151J RS1/10S182J RS1/10S1R0J RS1/10S1R8J		
C615,C616,C707,C715,C716 C254 C211,C212 C251 C252	CCSRCH331J50 CCSRCH391J50 CCSRCH561J50 CCSRCH8R0D50 CCSRCH9R0D50	R115-R120 R421-R424 R262,R264,R268,R271,R274 R277 R279	RS1/10S4R7J RS1/10S75R0F RS1/16S1500F RS1/16S1500F RS1/16S2201F		
C256,C471,C506 C401,C405,C454,C511,C512 C517,C611,C612,C617 C711,C712,C717,C804,C911 C281,C421,C422,C501	CEAT100M50 CEAT101M10 CEAT101M10 CEAT101M10 CEAT102M6R3	R321-R323 R905 Other Resistors	RS1/16S3302F RS1/16S75R0F RS1/16S####J		
C901 C201,C202,C237,C302,C601 C701,C73 C10,C203,C206,C215 C521,C522,C531,C591	CEAT1R0M50 CEAT221M6R3 CEAT221M6R3 CEAT470M16 CEAT470M16	OTHERS CN301 KR CONNECTOR CN103 KR CONNECTOR CN451 FFC CONNECTOR 17P JA502 4P PIN JACK JA501 4P PIN JACK	B13B-PH-K B5B-PH-K HLEM17S-1 VKB1126 VKB1132		
C621,C622,C721,C722,C801 C9 C423,C424 C11,C124,C230,C267,C296 C298,C304,C505,C913	CEAT470M16 CEAT470M16 CEAT471M6R3 CKSRYB102K50 CKSRYB102K50	JA401 4P PIN JACK CN104 4P FFC CONNECTOR CN102 12P FFC CONNECTOR CN201 15P FFC CONNECTOR CN101 24P FFC CONNECTOR	VKB1168 VKN1235 VKN1243 VKN1246 VKN1464		
C130,C134,C136,C226 C313,C606,C706 C219 C209 C112-C114,C513,C514	CKSRYB103K50 CKSRYB105K10 CKSRYB152K50 CKSRYB153K25 CKSRYB222K50	JA901 JACK X201 CRYSTAL RESONATOR (27MHz)	VKX1013 VSS1168		
C613,C614,C713,C714 C269 C208,C210 C258,C259 C255	CKSRYB222K50 CKSRYB333K16 CKSRYB472K50 CKSRYB473K50 CKSRYB474K10	C JCKB ASSY [VWV1994] CAPACITORS C942 C941	CEAT471M6R3 CKSRYF104Z25		
C125,C204,C205,C207 C213,C214,C216,C217,C220 C222-C225,C228,C231-C236 C239-C241,C244-C246,C253 C257,C260,C262,C264,C266	CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25	RESISTORS R941,R942 Other Resistors	RS1/10S75R0F RS1/16S####J		
C268,C270-C273,C282 C284-C288,C290,C312,C402 C404,C411,C415,C416,C453 C461-C463,C472-C476,C482 C492,C502,C532,C602,C605	CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25 CKSRYF104Z25	OTHERS CN941 4P MINI DIN SOCKET CN911 FFC CONNECTOR 5P	AKP7045 HLEM5S-1		
C632,C702,C705,C71,C72 C732,C74 C102,C132,C139,C243,C261 C263,C283,C289,C303,C311 C321,C341,C342,C412-C414	CKSRYF104Z25 CKSRYF104Z25 CKSRYF105Z10 CKSRYF105Z10 CKSRYF105Z10	C JCKB ASSY [VWV1995] SEMICONDUCTORS D991-D994	1SS355		
C43-C46,C504,C518 C592,C593,C6,C618,C718 C841,C912	CKSRYF105Z10 CKSRYF105Z10 CKSRYF105Z10	CAPACITORS C911,C912 C901-C904,C942 C914,C941	CCSRCH331J50 CEAT471M6R3 CKSRYF104Z25		
RESISTORS R222,R225 R515,R520,R615,R620,R715 R720 R511,R514,R611,R614,R711 R714	RAB4C330J RN1/16SE1002D RN1/16SE1002D RN1/16SE5601D RN1/16SE5601D	RESISTORS R903,R906,R907,R909,R910 R941,R942 Other Resistors	RS1/10S75R0F RS1/10S75R0F RS1/16S####J		
		OTHERS CN941 4P MINI DIN SOCKET CN901 FFC CONNECTOR 17P JA902 RGB CONNECTOR	AKP7045 HLEM17S-1 VKB1157		

Mark No. **Description** **Part No.**

D FLKY ASSY [VWG2483]

SEMICONDUCTORS

A IC101 PE5374B
D102 SLR-343VC

SWITCHES AND RELAYS

S103,S105-S108,S117,S119 VSG1024

CAPACITORS

C183 CKSRYB102K50
C151-C153 CKSRYB103K50
C102,C105,C182 CKSRYF104Z25
C104 CKSRYF104Z50

RESISTORS

All Resistors RS1/16S###J

OTHERS

IC104 REMOTERECEIVER UNIT RPM7240-H4
FL101 FL TUBE VAW1078
CN101 15P FFC CONNECTOR VKN1246
0 CONNECTOR ASSY 2P VKP2322
X101 CERAMIC RESONATOR VSS1142
(5MHz)

D FLKY ASSY [VWG2484]

SEMICONDUCTORS

IC101 PE5374B
D102 SLR-343VC

SWITCHES AND RELAYS

S103,S105-S108,S117,S119 VSG1024

CAPACITORS

C183 CKSRYB102K50
C151-C153 CKSRYB103K50
C102,C105,C182 CKSRYF104Z25
C104 CKSRYF104Z50

RESISTORS

All Resistors RS1/16S###J

OTHERS

IC104 REMOTE RECEIVER UNIT RPM7240-H4
FL101 FL TUBE VAW1078
CN101 15P FFC CONNECTOR VKN1246
0 CONNECTOR ASSY 2P VKP2322
X101 CERAMIC RESONATOR VSS1142
(5MHz)

D FLKY ASSY [VWG2494]

SEMICONDUCTORS

IC101 PE5374B
D102 SLR-343VC

SWITCHES AND RELAYS

S102-S107,S109-S118 VSG1024

CAPACITORS

C183 CKSRYB102K50
C151-C153 CKSRYB103K50
C102,C105,C182 CKSRYF104Z25
C104 CKSRYF104Z50

Mark No. **Description** **Part No.**

RESISTORS

All Resistors RS1/16S###J

OTHERS

CN102 KR CONNECTOR 3P B3B-PH-K
IR101 REMOTE RECEIVER UNIT RPM7240-H4
V101 FL TUBE VAW1078
CN101 15P FFC CONNECTOR VKN1275
X101 CERAMIC RESONATOR VSS1142
(5MHz)

E PWSB ASSY [VWG2482]

SWITCHES AND RELAYS

S101 VSG1024

E PWSB ASSY [VWG2495]

SWITCHES AND RELAYS

S101 VSG1024

OTHERS

CN103 KR CONNECTOR 3P B3B-PH-K

F POWER SUPPLY UNIT [VWR1376]

OTHERS

⚠ CP1 PROTECTOR (800mA) AEK7008

F POWER SUPPLY UNIT [VWR1377]

OTHERS

⚠ CP1 PROTECTOR (800mA) AEK7008

6. ADJUSTMENT

6.1 ADJUSTMENT ITEMS AND LOCATION

■ Adjustment Items

[Mechanism Part]

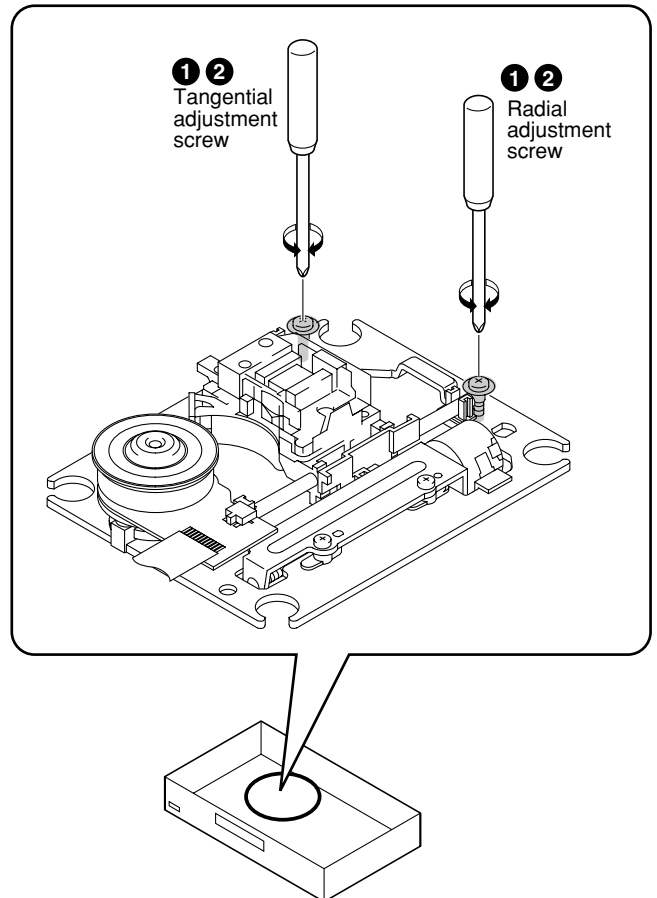
- ❶ Tangential and Radial Height Coarse Adjustment
- ❷ DVD Error Rate Adjustment

[Electrical Part]



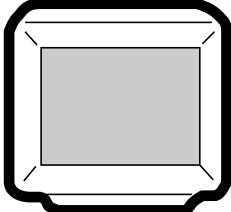
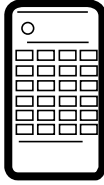


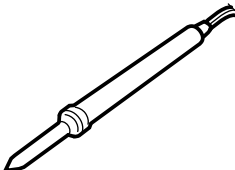
Electrical adjustments are not required.

■ Adjustment Points (Mechanism Part)

Cautions: After adjustment, adjustment screw locks with the Screw tight.



6.2 JIGS AND MEASURING INSTRUMENTS



 ⊕ Screwdriver (large)	 ⊕ Screwdriver (medium)	 TV monitor	 Test mode remote control unit (GGF1381)
 ⊕ Precise screwdriver	 DVD test disc (GGV1025)	 Soldering iron	Screw tight (GYL1001)

When

Adjustment Points


A

■ Exchange Parts of Mechanism

Exchange the 03 SD Pickup Assy-S		<div>Mechanical point</div> <div>①, ②</div> <div>* After adjustment, screw locks with the Screw tight.</div>
		<div>Electric point</div> <div></div>
Exchange the Traverse Mecha. Assy-S		<div>Mechanical point</div> <div></div>
		<div>Electric point</div> <div></div>

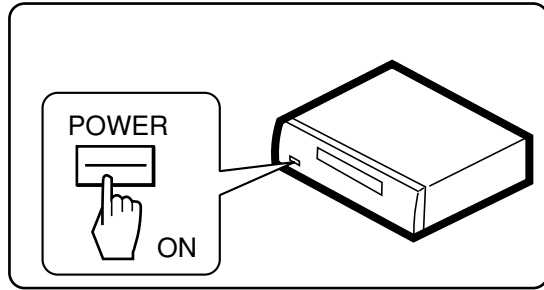
C

■ Exchange PCB Assy

Exchange PC Board LOAB and DVDM ASSYS		<div>Mechanical point</div> <div></div>
		<div>Electric point</div> <div></div>

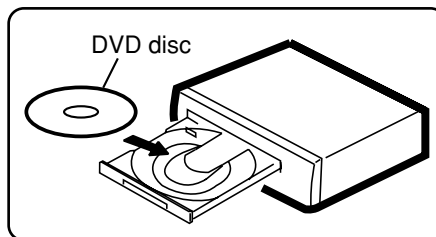
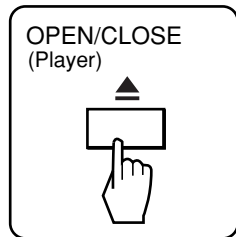
6.4 TEST MODE

POWER ON

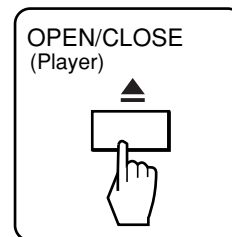


DISC SET

<TRAY OPEN>

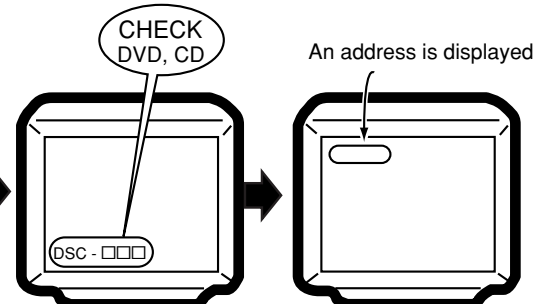
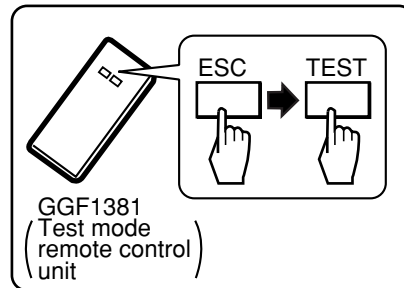
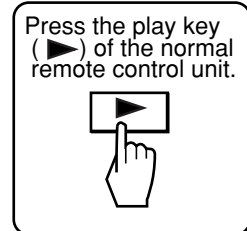


<TRAY CLOSE>



TEST MODE: PLAY

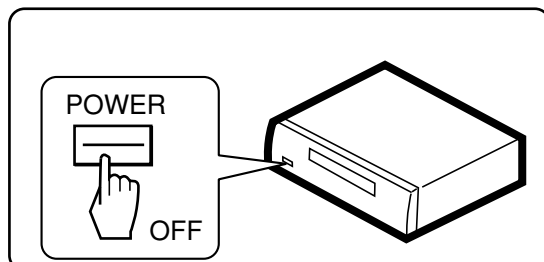
<PLAY>



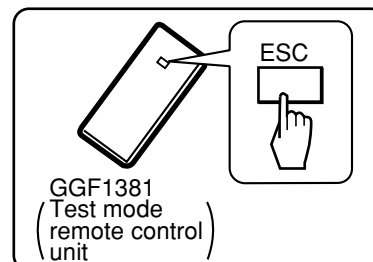
Notes:

- After going into test mode, if you play back the disc, "DISC-NON" is displayed.
- The video signal and the audio signal are outputted during the test mode.
- The SKIP key and the SCAN key are effective during the test mode.

TEST MODE: OFF



OR



6.5 MECHANISM ADJUSTMENT



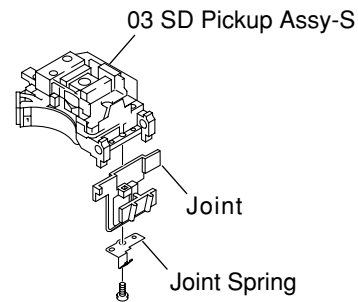
1 Tangential and Radial Height Coarse Adjustment

START

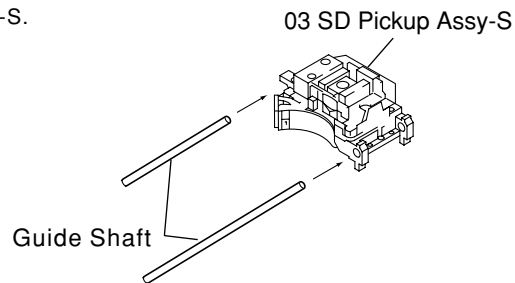
- Remove the 03 SD Pickup Assy-S from the Traverse Mecha. Assy.
- Remove the joint and the joint spring of the 03 SD Pickup Assy-S.

Note:

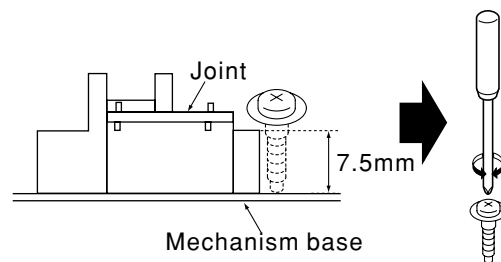
Before removing the flexible cable for the pickup, soldering of the pickup circuit is necessary.
For details, see "7.1.10 DISASSEMBLY".



- Pass through the guide shaft to a new 03 SD Pickup Assy-S.
- Attach it to the Traverse Mecha. Assy.



- Put the joint between the Tangential (or Radial) adjustment screw and the mechanism base and turn each screw to adjust the height.
(Refer to "6.1 ADJUSTMENT ITEMS AND LOCATION".)



- Attach the Traverse Mecha. Assy-S to the 04 LOADER Assy.
- Turn it over and attach the joint and the joint spring.
- Arrange the flexible cables.
(Refer to "7.1.10 DISASSEMBLY".)

2 DVD Error Rate Adjustment

Notes:

- Use disc: GGV1025
- BER:Block Error Rate

START

- Play the DVD test disc at inner track (around #30000)
- Display BER on the monitor



Mechanism Assy

Adjust the radial adjustment screw so that BER becomes under "5E-5".

BER : under "5E-5"

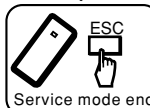
Mechanism Assy

Fasten the radial adjustment screw so that BER becomes over "1E-3".

BER : over "1E-3"

- Unfasten the radial adjustment screw by 90 degrees step till BER becomes over "1E-3" again .
- Record the number of rotation (N1).

- Fasten the radial adjustment screw till the number of rotation becomes half of N1.



Service mode end

- Play the DVD test disc at outer track (around #200000)

→ Service mode



Mechanism Assy

Fasten the tangential adjustment screw so that BER becomes over "1E-3".

BER : over "1E-3"

- Unfasten the tangential screw by 90 degrees step till BER becomes over "1E-3" again .
- Record the number of rotation (N1).

- Fasten the tangential adjustment screw till the number of rotation becomes half of N1.

Service mode end

CHECK

Confirm that the error rate is under "5E-5".

Turn the POWER OFF in case of NG once, and perform the adjustment once again.

If error rate is OK, locks a root of tangential and radial adjustment screws with the Screw tight. Screw tight: GYL1001



Disc playback normally.
• The measurement of block error rate



Service mode end

1234

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 TEST MODE

A

■ Test Mode Functional Specification

① Test mode entry

In the power ON state, press the [ESC] (A8-5F) key and [TEST / RANDOM] (A8-5E) key in order of the Test mode remote control unit.

- Light the all FL and LEDs.
- OSD displays test mode.

■

Note:

- * When pressing the keys of something, the FL displays "NO DISC" and the LED lighting disappears.

B

② Release the Test mode

- Turn off the power.
- Press the [ESC] (A8-5F) key of the remote control unit and reset it.

■

③ LD ON

- DVD : Press the [TEST] (A8-5E) and [1] (A8-01) keys in order, and turn on the laser diode (650n).
CD : Press the [TEST] (A8-5E) and [4] (A8-04) keys in order, and turn on the laser diode (780n).

C

■

D

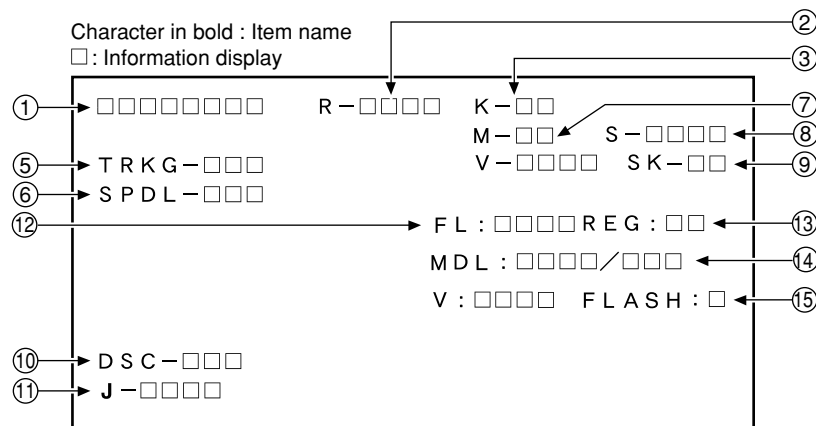
■

E

■

F

7.1.2 DISPLAY SPECIFICATION OF THE TEST MODE



① Address indication

The address being traced is displayed in number.
(as for the DVD, indication of decimal number is possible.)
DVD : ID indication (hexadecimal number, 8 digits)

CD : ID indication [*****]

② Code indication of remote control unit [R - * * * *]

In case of double code, display a 2nd code.

③ Main unit keycode indication [K - * *]

⑤ Tracking status [TRKG - * * *]

Tracking on : [ON]
Tracking off : [OFF]

⑥ Spindle status [SPDL - * * *]

[OFF], [CLV]

⑦ Mechanism (loading) position value [M - * *]

Unknown : [01] or [41]
Open state : [04]
Close state : [08]
During opening : [12]
During closing : [22]

⑧ Slider position [S - * * * *]

In Side Switch ON : [01]
In Side Switch OFF : [00]

⑨ Output video system [V - * * * *]

NTSC system : [NTSC]
PAL system : [PAL]
Automatic setting : [AUTO]

Scart terminal output [SK - * *]

(Display only the WY model which can do the output setting of scart terminal.)

VIDEO : [00]
S-VIDEO : [01]
RGB : [02]

⑩ Disc sensing [DSC - * * *]

The type of discs loaded is displayed.
[DVD], [CD], [VCD], []

⑪ Jitter value [J - * * * *]

Note:Don't use it.

⑫ Version of the FL controller [FL: * * * *]

⑬ Region setting of the player [REG: *]

Setting value : [1] to [6]

⑭ Destination setting of the FL controller [MDL: * * * * / * * *]

Four characters in the front represent code 01.
Three characters in the back represent the destination code.
J: /J, K: /KU, /KC, /KU/KC, R: /RL/RD, RAM: /RAM,
LB: /LB, WY: /WY

⑮ Version of the flash ROM [V: *. * * *] Flash ROM size [FLASH = * *]

7.1.3 FUNCTIONAL SPECIFICATION OF THE SHORTCUT KEY

Only during normal playback, the following shortcut keys can be assigned by pressing a required key after pressing the ESC key of the remote control unit. To quit, press the ESC key

Command Contents	Conditions	Remote Control Key Name	Remote Control Code
Memory clear and region / revision indication		CLEAR (*1)	A8-45
Average value measurement of DVD error rate		5 (*1)	A8-05
CD error rate measurement		5 (*1)	A8-05
Scart terminal output : VIDEO	WY, models equipped with Scart terminal	AUDIO	AF-BE
Scart terminal output : S-VIDEO		SUBTITLE	AF-36
Scart terminal output : RGB		ANGLE	AF-B5
Progressive OFF	Only for progressive models	R_SKIP	A3-9D
Progressive ON		F_SKIP	A3-9C
FL indication of ID number		STEREO (*1)	A8-4A
ZOOM ON (X2 -> X4 -> x1)		ZOOM	AF-37
Service mode indication (error rate indication, etc.)		CHP/TIM (*1)	A8-13
Model information indication		CHAP (*1)	A8-40
Title search Input mode IN Title No. input Search execution		SIDE A (*1) Numbers (*1) PLAY (*1)	A8-4D A8-00 to A8-09 A8-17
Region confirmation mode		AUDIO (*1) Numbers (*1)	A8-1E A8-01 to A8-08

*1 : Test mode remote control unit

• Service mode indication (ESC + CHP/TIM keys)

ID Address

The error rate is always displayed in exponential notation, e.g., *. * * e - *, for both DVDs and CDs.

EDC/ID/AV 1 error history (ID Address, EDC/ID Error, last eight errors)

• Calculation of the average error rate (ESC + "5" [Test mode remote control unit] keys)

The average of the last eight error rates is calculated and indicated in exponential notation. After the calculation is completed, "OK" or "NG" is displayed. If "NG" is displayed, the disc tray will open (for both DVDs and CDs)

For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

• Indication of model information (ESC + CHAP keys)

The items from 12 to 15 of the TEST MODE Indications are displayed. However, in the indications, S in the standard test mode is changed to CHIP VERSION, and M is changed to RF VERSION. For details, see 7.1.4.

• Region confirmation mode (ESC + AUDIO [Test mode remote control unit] + "1"-"8" [Test mode remote control unit] keys)

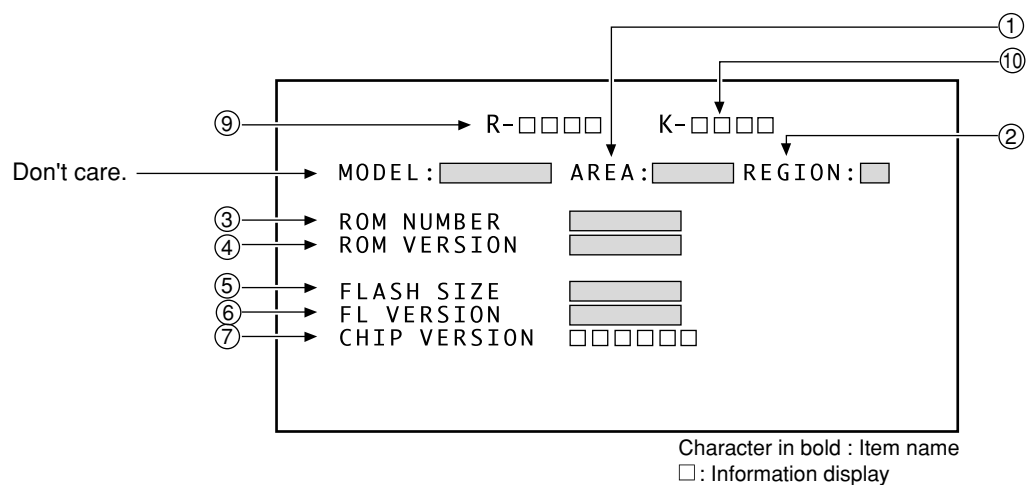
After you press the AUDIO key while holding the ESC key pressed and then input the region number, if the number is different from that set in the unit, an error message is displayed, and the tray opens.

7.1.4 SPECIFICATION OF MODEL INFORMATION DISPLAY

To display model information : Press the ESC key then the CHAP key.

To close the model information display : Press the ESC key.

• Display contents



① Destination indication

Display it according to model information set from the FL controller.

② Region No.

③ Part number

④ ROM version

⑤ Flash size

⑥ FL controller version

⑦ CHIP VERSION

⑨ Remote control code

⑩ Key code of Main unit

1 2 3 4

7.1.5 FUNCTIONAL SPECIFICATION OF THE SERVICE MODE

A

• Display during Service Mode

To enter Service Mode, press the CHP/TIM key while holding the ESC key pressed.
To quit, press the ESC key.

Service mode display

① ID Address

② Error rate (always displayed), in exponential notation

ERROR RATE : * * * * *
(* * * *)

↑
Number of error

B

• Calculation of the average error rate

For DVDs: OK with 5.0e-4 or less, for CDs: OK with 7.6e-3 or less

ex) For DVDs

• Step 1

△△e -□

△△e -6 : OK

△△e -5 : OK

△△e -4 : Refer to Step 2

△△e -3 : NG

△△e -2 : NG

• Step 2

△△e -4

3.0e -4 : OK

4.0e -4 : OK

5.0e -4 : OK

6.0e -4 : NG

7.0e -4 : NG

C

③ EDC/ID error history (ID Address, EDC/ID errors, last eight errors)

Note:

* Error of AV1 is not supported in this player.

Indication plan contents

	SERVICE MODE	ADDRESS	/ EDC	/ ID	/ AV	
①	□□□□□□□□	□□□□□□□□	□□	□□		③
②	□□□□□□□□	□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		
		□□□□□□□□	□□	□□		

Character in bold : Item name

□ : Information display

Case when this diagnosis is required :
When playback of any disc, including a test disc (DVD: GGV1025, CD: STD-905), cannot be performed

How to diagnose

In the case mentioned above, degradation of the laser diodes (LDs) mounted on the 03 SD Pickup Assy-S is suspected. Measure the voltage between the two ends of one of the resistors mentioned below.

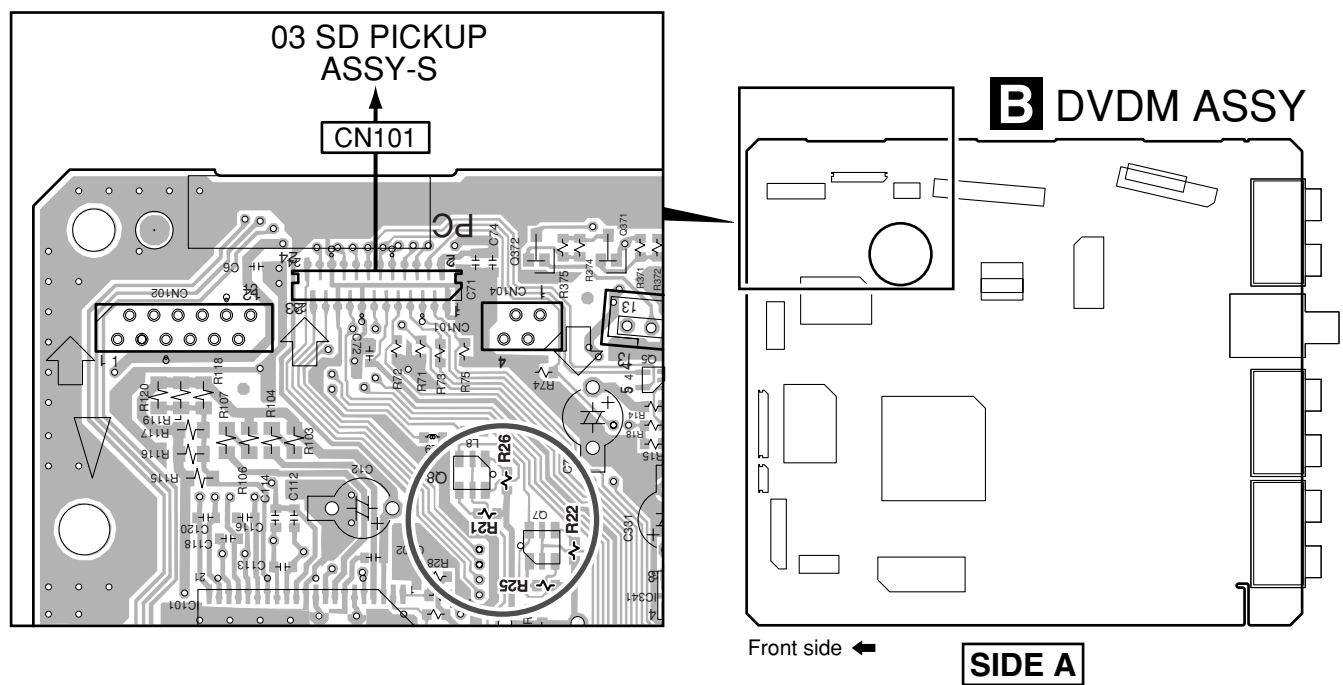
• No playback of a DVD :

Measure the voltage between the two ends of R22 or R25 on the DVDM Assy.
If the voltage is 0.4 V or higher, the 650-nm LD is degraded.

• No playback of a CD :

Measure the voltage between the two ends of R21 or R26 on the DVDM Assy.
If the voltage is 0.4 V or higher, the 780-nm LD is degraded.

If the measurements show degradation of an LD, replace the 03 SD Pickup Assy-S.



7.1.7 TROUBLE SHOOTING

No.	Symptoms	Diagnosis Contents	Possible Defective Points
1	The power is not turned on.	Check the voltage of EV4.0V, -28V, FLDC + and FLDC - on the POWER SUPPLY Unit.	POWER SUPPLY Unit
		Are wires of output connector (POWER SUPPLY Unit) and CN301 (DVDM Assy) disconnected or damaged ?	Connector / cable
		Check that the voltage at IC101-pin 22 (KEY0) on the FLKY Assy becomes 0 V when the POWER key is pressed and 3.3 V when it is released.	FLKY Assy Tact SW (when operation of only the POWER key on the main unit is not accepted)
		Check that the following voltage is output : IC341-pin 5 : 3.3V on the DVDM Assy	DVDM Assy 3.3V Regulator IC (IC341)
		Check that the voltage at IC101-pin 17 (SEL IR) on the FLKY Assy is in the range between 0 and 3.3 V while receiving signals from the remote control unit when any key on it is pressed.	FLKY Assy Remote receiver section (when operation of only the POWER key on the remote control unit is not accepted)
2	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Is the level at both IC101-pin 12 (RESETOUT) and pin 11 (POWER ON) on the FLKY Assy "H" ?	FLKY Assy FL Control IC (IC101)
		• Check the voltage of E+6.8V and SW3.3V on the POWER SUPPLY Unit. • Check the voltage of Pcont is about 3V on the POWER SUPPLY Unit.	POWER SUPPLY Unit
		Check that the following voltage are output : IC311-pin 5 : 5V on the DVDM Assy.	DVDM Assy 5V Regulator IC (IC311)
		Is a resonator (X201 : 27MHz) on the DVDM Assy oscillating ?	DVDM Assy Crystal resonator (X201)
		• Is a signal input into IC203-pin26 (PCE#) on the DVDM Assy ? (Is a signal "H" for 80 mS and then "L" after the power is turned on ?) → Communication with flash ROM. • Are the signals input into IC202-pin 16 (DWE#), pin 19 (DCS#) and pin 38 (SDCLK) on the DVDM Assy ? (Is a signal fluctuating ?) → Communication with SDRAM	DVDM Assy DVD IC (IC201) Flash ROM (IC203) SDRAM (IC202)
		Is a signal output from IC203-pin 28 (PRD#) on the DVDM Assy? (Is a signal fluctuating for several hundred mS after the power is turned on ?)	DVDM Assy Flash ROM (IC203)
		Is a signal input into IC101-pin 16 (ACK) on the FLKY Assy ? (Is a signal fluctuating ?) → Communication with FL Control IC	DVDM Assy DVD IC (IC201) FLKY Assy FL Control IC (IC101)
		Is a signal output from IC101-pin 10 (XREADY) on the FLKY Assy ? (Is a signal fluctuating in the range of 0-3V ?)	FLKY Assy FL Control IC (IC101)
		Are the signals output from IC101-pin 9, pin 8 and pin 7 on the FLKY Assy ? (in the range of 0-3V)	DVDM Assy DVD IC (IC201) – FLKY Assy FL Control IC (IC101) communication line
3	An opening screen is not displayed on the monitor (The FL display lights. The mechanism does not work.)	Are the signals of IC204-pin 5(SDA) and pin 6(SCL) on the DVDM Assy fluctuating for one or two seconds after the power is turned ?	DVDM Assy EEPROM (IC204)
		Check the video signal path between DVD IC (DVDM Assy IC201) and video-out terminal (see the block diagram)	DVDM Assy Video circuit after DVD IC (IC201)

No.	Symptoms	Diagnosis Contents	Possible Defective Points
4	A tray cannot be opened. (An opening screen is displayed on the monitor)	Does the voltage of CN103-pin 3 and pin 5 on the DVDM Assy change normally ? Pin 3 (SW2(TRIN)): Tray is fully closed: "L" Pin 5 (SW1(TROUT)): Tray is fully opened: "L"	LOAB Assy Tray SW (S101)
		Is a LOAD-DRV signal reaching ?	DVDM Assy DVD IC (IC201)
		Are the signals output from IC101-pin 36 and pin 37 (CN103-pin 1 and pin 2) on the DVDM Assy ? Pin 36: Approx. 6V during opening tray approx. 0V during closing tray. Pin 37: Approx. 0V during opening tray approx. 6V during closing tray.	DVDM Assy FTS Driver IC (IC101)
		Are wires of CN104 and CN103 on the DVDM Assy disconnected or damaged ?	Connector / cable
		Does the voltage of CN102-pin 12 change by pressing the Inside switch.	Inside switch
5	Playback impossible (no focusing)	Are the signals output from IC101-pin 34 (FOCS_DRV) and pin 35 (FOCS_RTN) on the DVDM Assy ?	DVDM Assy FTS Driver IC (IC101)
		Does 650-nm LD emit light ? Does a pickup lens move up / down ? Does an actuator spring bend ?	Pickup
		Are plastic parts damaged ? Or is a shaft detached ? Is the turntable detached or tilted ?	Mechanism section (motor)
		Is flexible cable of CN101 on the DVDM Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 42 (FOSO) on the DVDM Assy ? (Device control of about 1.4 V is output usually. It is fluctuated by about ± 250 mV with focus up / down.)	DVDM Assy DVD IC (IC201)
6	Playback impossible (Spindle does not turn)	Are the signals output from IC101-pin 12 (W), pin 13 (V) and pin 14 (U) on the DVDM Assy ? Is pin 41 (STBY) fixed LOW and is pin 38 (ENDM) fixed LOW ?	DVDM Assy FTS Driver IC (IC101)
		Is there any part detached from the spindle motor ? Or Is there any foreign object lodged in it ?	Mechanism section (Spindle motor)
		Are wires of CN102 on the DVDM Assy disconnected or damaged ?	Flexible cable / connector
		Is signal output from IC201-pin 37 (DMSO) on the DVDM Assy ?	DVDM Assy DVD IC (IC201)
7	Playback impossible (Playback stops)	Does 650-nm LD deteriorate ? If the voltage at each both ends of R22 and R25 on the DVDM Assy is 0.4 V or more, the 650-nm LD is definitely deteriorated.	650-nm LD deteriorated. (When playback of a DVD is impossible)
		Does 780-nm LD deteriorate ? If the voltage at each both ends of R21 and R26 on the DVDM Assy is 0.4 V or more, the 780-nm LD is definitely deteriorated.	780-nm LD deteriorated. (When playback of a CD is impossible)
		Is there abnormality in FG waveform ?	DVDM Assy FG output : FTS Driver IC (IC101)
		Are there scratches or dirt on the disc ?	Disc
8	Picture disturbance during playback (block noise, freeze, other)	Are there scratches or dirt on the disc ? Is there a problem with the format of the disc ?	Disc
9	No sound (Picture is normal)	Check the waveform (ABCK, ALRCK, ACLK, ASDATA).	DVDM Assy DVD IC (IC201)
		Is signal output from audio DAC IC on the DVDM Assy ? Main CH : IC501-pin 7, pin 8 Multi CH : IC601-pin 7, pin 8, IC701-pin 7, pin 8	DVDM Assy Audio Dac IC (IC501) Audio Dac IC (IC601, IC701)

● Symptoms That May Occur When Any Of The Following ICs Is In Failure

IC	Symptoms
EEP ROM (DVDM Assy : IC204)	User's data cannot be stored in memory. The ID number is lost.
8M Flash ROM (DVDM Assy : IC203)	The power cannot be turned on. Downloading of the firmware cannot be performed.
DVD IC (DVDM Assy : IC201)	Any kind of symptoms (no power, a failure in any of the servo, video and audio systems, etc.) may be generated, because the DVD processing is performed by a single chip.
64M SDRAM (DVDM Assy : IC202)	No power. Block noise is generated during playback.

Caution:

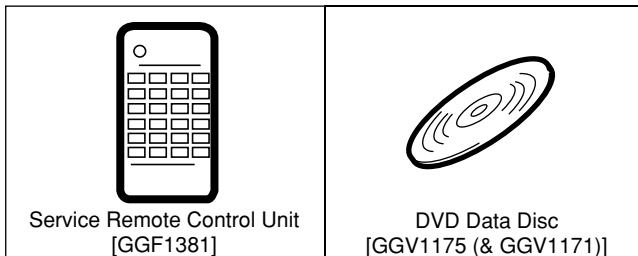
For the DVD players compatible with DVD-RW, for playback of a DVD-RW disc (CPRM), it is necessary that an individual ID number and ID data are set for each player. If the ID number and ID data be not properly set in the manner described below, future operations cannot be guaranteed. The ID number is written on the yellow label at the rear panel of the player.
If there is no yellow label, before downloading FLASH ROM, take note of the ID number set following the procedures outlined in "ID Number Confirmation Mode" on the next page.

Note: Enter ID numbers while the unit is in Stop mode so that the values set will be immediately written to the flash ROM.

Setting an ID number or ID data is required in the following case:

If "No ID Number!" or "NO ID DATA!" is displayed on the TV screen and on the FL display for a few seconds immediately after the power to the player is turned on or during Stop mode.

JIGS AND MEASURING INSTRUMENTS



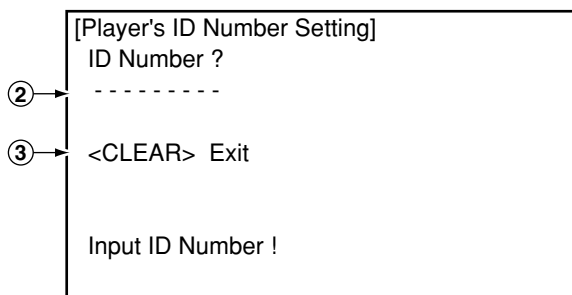
Note) GGV1175 is to be released in May, 2004.

ID Number Input Mode

- ① To enter ID Number Input Mode, with no ID number set, such as in a case of immediately after upgrading the firmware, press the ESC key then the STEREO key.

Note: If a previous ID number and ID data, such as a factory-preset ID number and ID data, are maintained, the unit enters ID Number Confirmation Mode when the above keys are pressed. However, if only an ID number is maintained, the unit enters ID Data Input Mode.

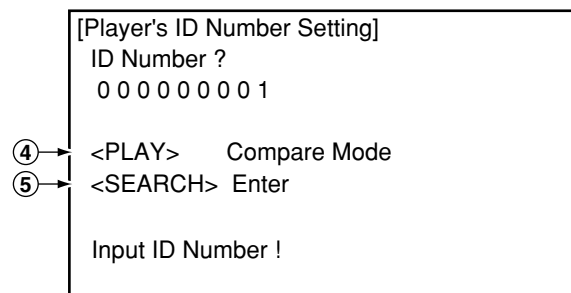
- ② Enter a 9-digit ID number. The ID number is also displayed on the FL display.
- ③ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.



- ④ After entering all 9 digits, if you press the PLAY key, the unit enters Compare mode. Enter the same ID number again. Only if your two input numbers match, the ID number is set. Compare mode helps eliminate mistyping of the ID number.

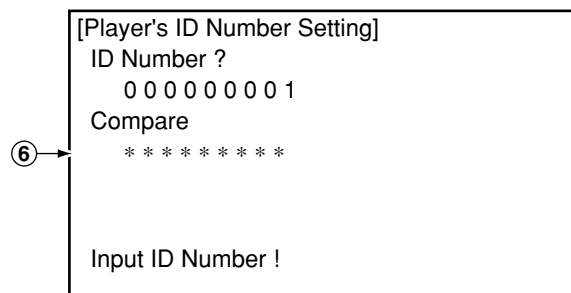
Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ② without doing anything else.

- ⑤ After entering all 9 digits, if you press the SEARCH key, the unit unconditionally sets the input number as the ID number. Then the unit automatically enters Player's Data Input Mode. (The SEARCH key is not accepted after all 9 digits have been entered.)



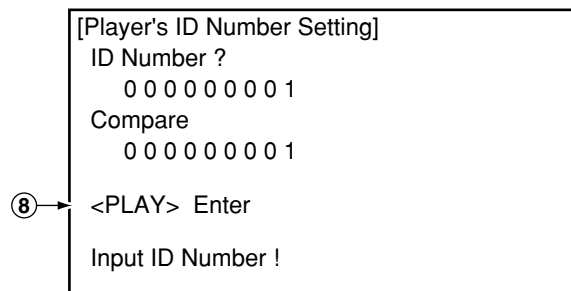
- ⑥ This display appears when the PLAY key is pressed in Step 4. Enter a 9-digit number to compare. The number is also displayed on the FL display.

- ⑦ By pressing the CLEAR key without having input a number, the unit returns to Step ② without doing anything else. Each press of this key after a number has been input deletes one digit.



- ⑧ After entering all 9 digits, if you press the PLAY key, the unit compares the numbers input in Steps ② and ⑥, and only if the numbers match, that number is set as the ID. Then the unit automatically enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Input Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ⑥ without doing anything else.



ID Number Confirmation Mode

① To enter ID Number Confirmation Mode after the ID number and the ID data are set, press the ESC key then the STEREO key.

② The ID number already set is displayed.
(It is also displayed on the FL display.)

③ Enter a 9-digit number for comparison. This is not required when you only wish to check the ID number visually.
(The number is also displayed on the FL display.)

④ By pressing the CLEAR key without having input a number, you can exit this mode. Each press of this key after a number has been input deletes one digit.

[Player's ID Number Setting]

ID Number ?

0 0 0 0 0 0 0 1

Compare

* * * * *

<CLEAR> Exit

Input ID Number !



⑤ After entering all 9 digits, if you press the PLAY key, the unit compares the number entered in Step ② with the ID number set, and only if the numbers match, the unit automatically exits ID Number Confirmation Mode. If an ID data has not been entered, the unit enters ID DATA Input Mode. If the numbers do not match, the disc tray is opened, and the unit exits ID Number Confirmation Mode.

Note: If you press the PLAY button before inputting a 9-digit ID number, the unit returns to Step ④ without doing anything else.

⑥ After entering all 9 digits, if you press the STOP key, the unit compares the number entered in Step ③ with the ID number set, and only if the numbers match, the unit automatically deletes the ID number and exits this mode. If the numbers do not match, the disc tray is opened, and the unit exits this mode. (The STOP key is not accepted after all 9 digits have been entered.)

[Player's ID Number Setting]

ID Number ?

0 0 0 0 0 0 0 1

Compare

0 0 0 0 0 0 0 1

<PLAY> Enter

<STOP> Memory Clear

Input ID Number !

• Indication of an ID number already set

An ID number already set is displayed in the following cases:

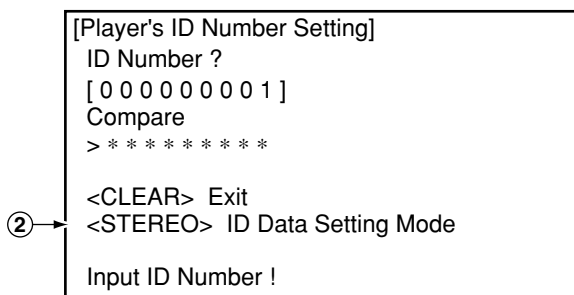
- 1) When the ESC key then the CLEAR key are pressed, user settings are cleared, then the ID number set is displayed on the screen. In this case, the ID number is not displayed on the FL display.
- 2) When the unit enters ID Number Confirmation Mode by your pressing the ESC key then the CLEAR key, the ID number set is displayed. In this case, the ID number is also displayed on the FL display.
If you only need to confirm the ID number, you can exit this mode by pressing the CLEAR key or turning off the power.

• Indication when no ID number is set

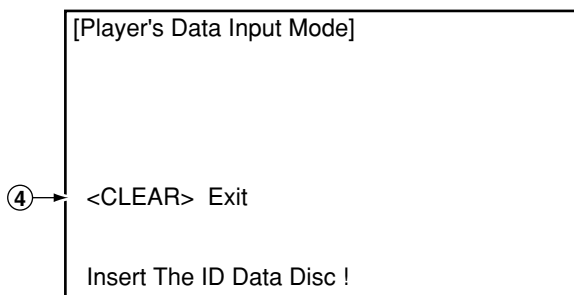
If no ID number is set, the message "No ID Number!" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

ID DATA Input Mode

- ① To enter ID DATA Input Mode, with the ID number set, press the ESC key then the STEREO key.
- ② When the STEREO key is pressed, the unit enters ID DATA Input Mode.

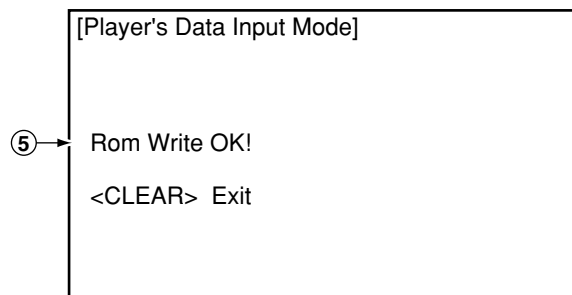


- ③ If the DVD DATA DISC is loaded in this mode, the unit automatically starts reading the data.
(If the DVD DATA DISC has already been loaded, the unit does not start reading the data. In this case, open then close the tray.)
- ④ To exit this mode, press the CLEAR key. While data are being read from the DVD DATA DISC, you cannot exit this mode.

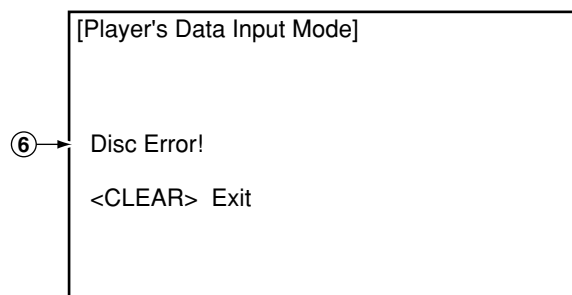


- ⑤ When writing of the data read from the disc to flash ROM is completed, "Rom Write OK!" is displayed. After seeing this message, you can exit this mode by pressing the CLEAR key.

Note: Whether or not the data have been written to flash ROM can be confirmed by watching for the message "Rom Write OK!" being displayed after the disc is read.



- ⑥ If the data cannot be read from the disc, "Disc Error!" is displayed on the screen, and the disc is ejected.

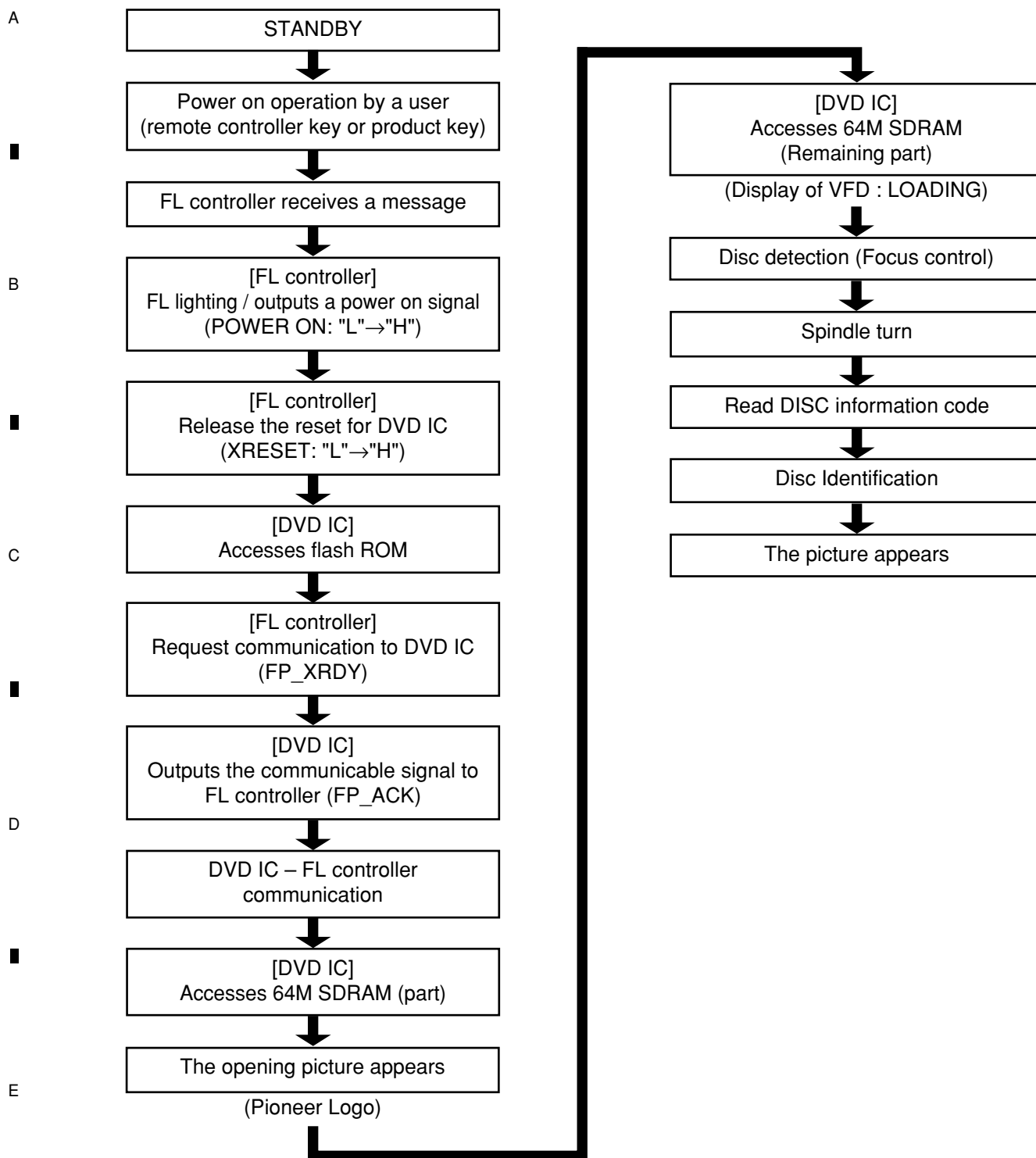


• Indication when the data have not been set

If no ID data are set after the ID number is changed, the message "NO ID DATA" flashes on the screen and FL display for a few seconds after the power is turned on or during Stop mode.

7.1.9 SEQUENCE AFTER POWER ON





Flow chart from power on to the picture output

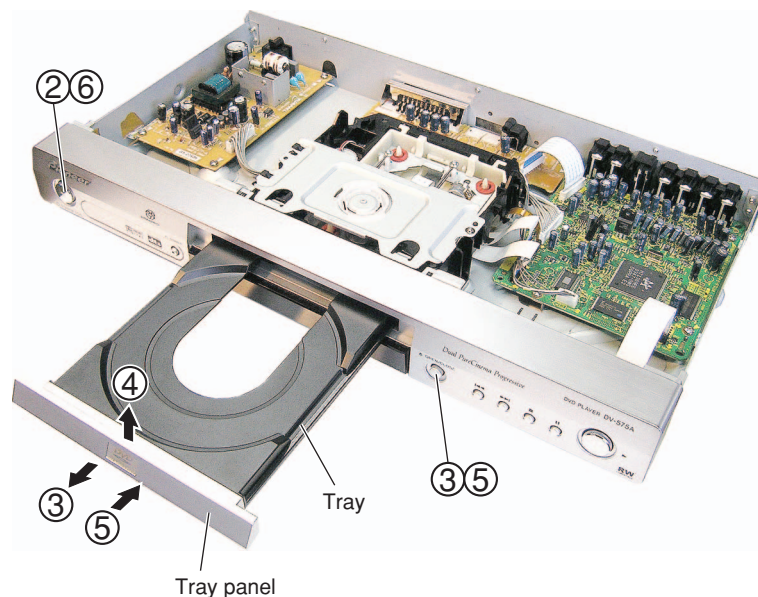


Note: Even if the unit shown in the photos and illustrations in this manual may differ from your product, the procedures described here are common.

Diagnosis of the DVDM Assy

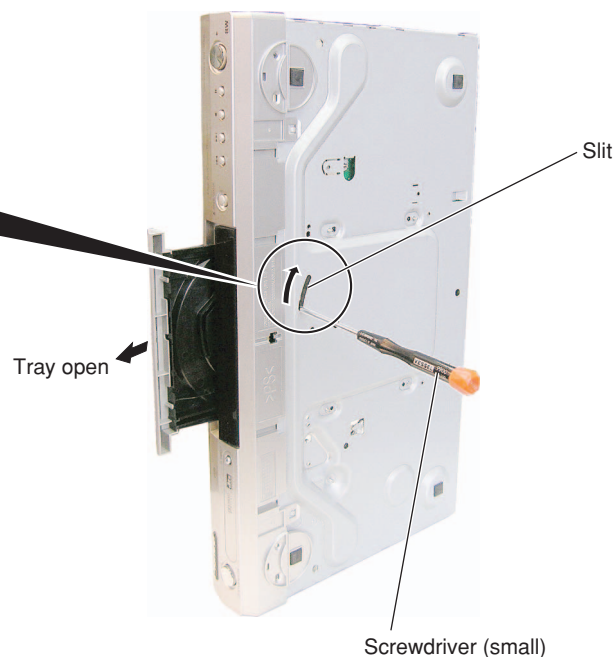
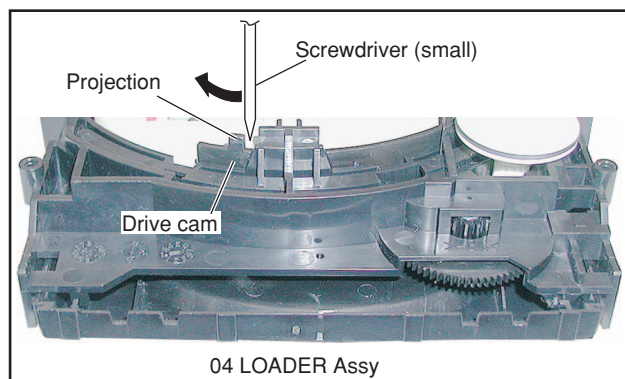
1 Bonnet and Tray panel

- ① Remove the bonnet by removing the seven screws.
- ② Press the  STANDBY/ON button to turn on the power.
- ③ Press the  button to open the tray.
- ④ Remove the tray panel.
- ⑤ Press the  button to close the tray.
- ⑥ Press the  STANDBY/ON button to turn off the power.



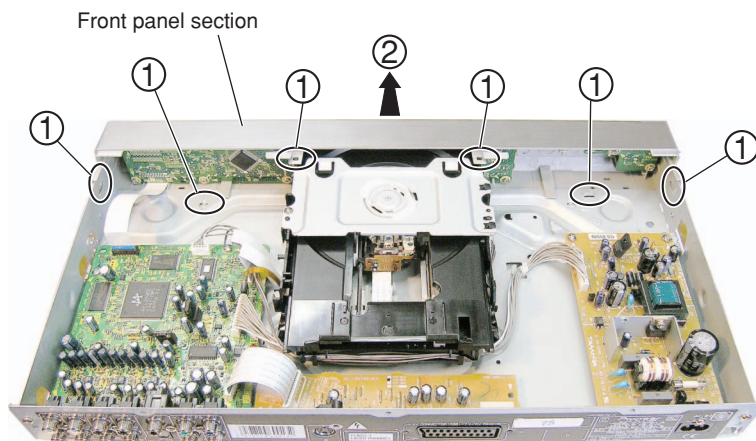
How to open the Tray when the power cannot be on

Insert a screwdriver (small) into the slit located at the bottom of the unit, and slide the projection of the drive cam in the 04 LOADER Assy in the direction of the arrow, as indicated in the photo. If the tray pops out a little, fully pull it out by a hand.



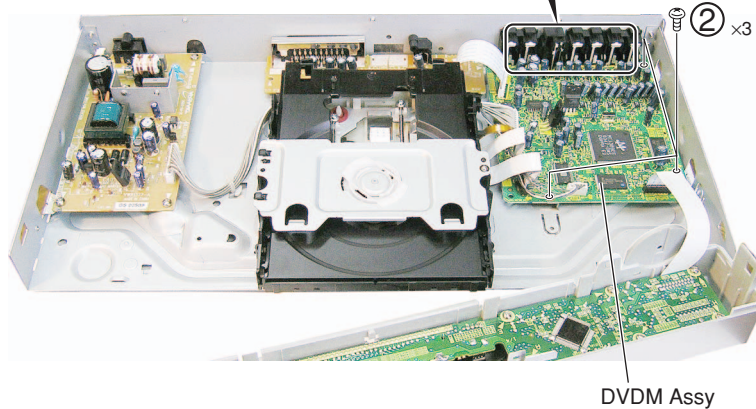
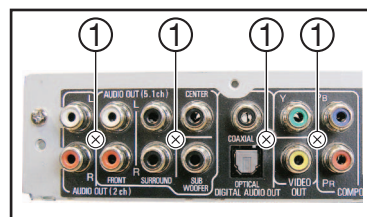
2 Front panel section

- ① Remove the six hooks.
- ② Remove the front panel section.



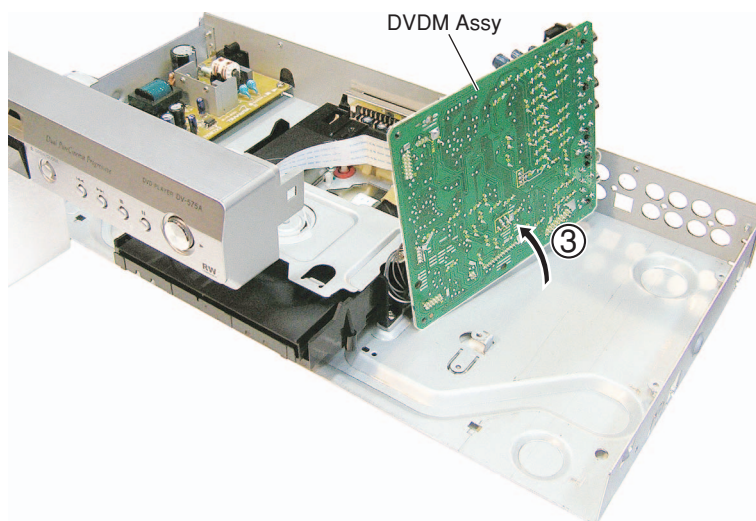
3 DVDM Assy

- ① Remove the four screws.
- ② Remove the three screws.



- ③ Remove the DVDM Assy and stand it against the other parts.

Diagnosis

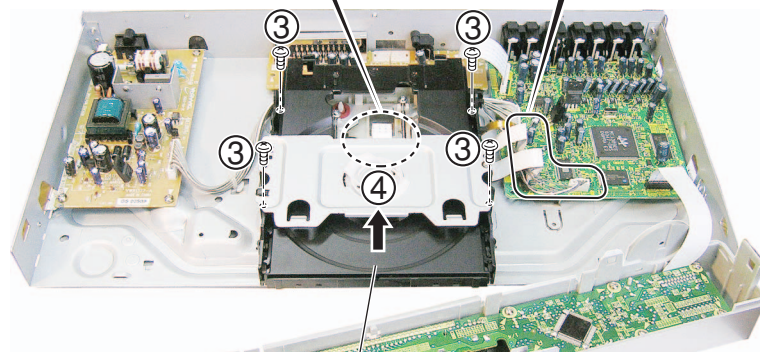
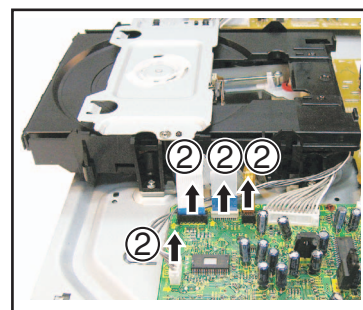
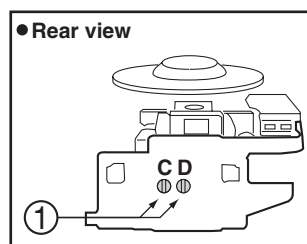


4 04 LOADER Assy

- ① Short-circuit two points of C and D by soldering.

Note: After replacement, connect the flexible cable, then remove the soldered joint (open).

- ② Disconnect the four connectors.
 ③ Remove the four screws.
 ④ Remove the 04 LOADER Assy.



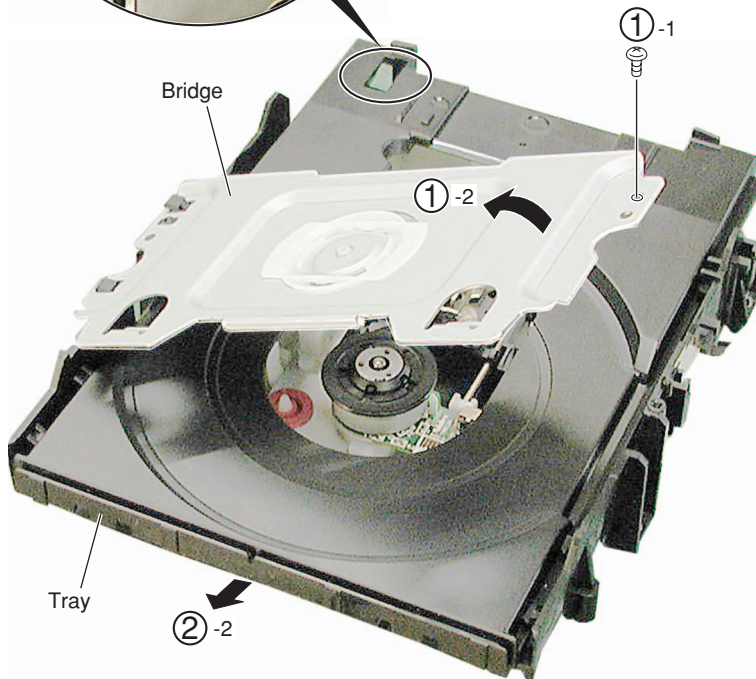
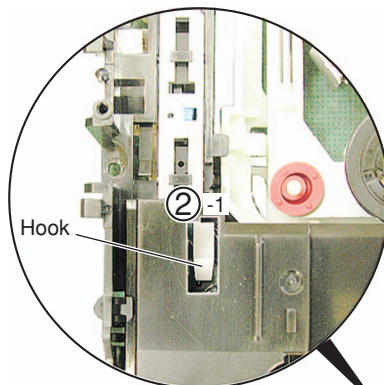
04 LOADER Assy

Removing the Traverse Mecha. Assy-S and 03 SD Pickup Assy-S

A

1 Bridge and Tray

- ① Remove the bridge by removing the one screw.
- ② Pull out the tray, then remove it by pressing the hook.



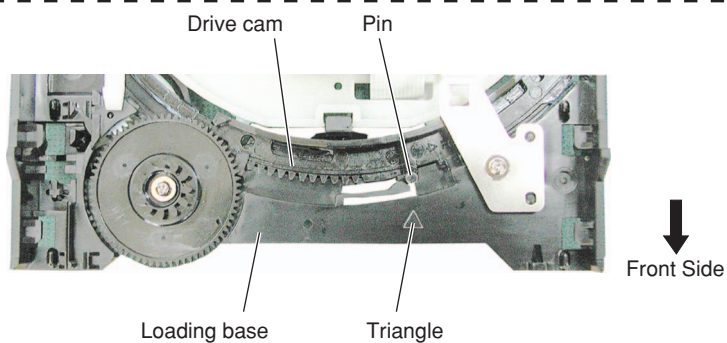
B

C

D

Note when reinserting the Tray

When reinserting the tray, first align the triangle printed on the loading base and the pin of the drive cam, then insert the tray.

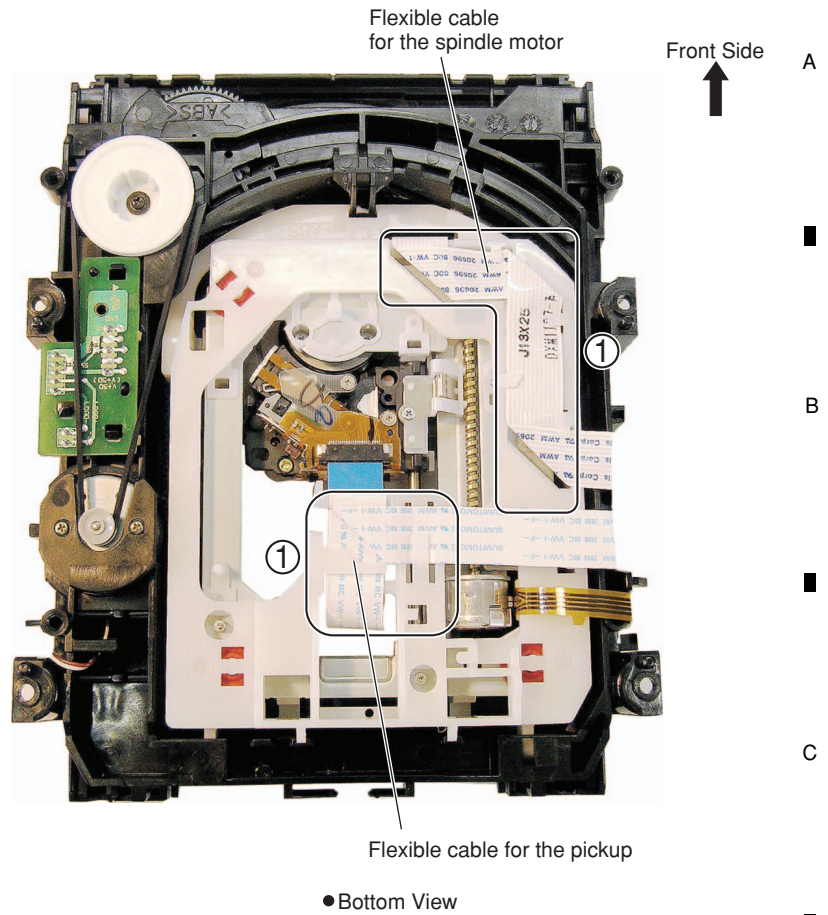


E

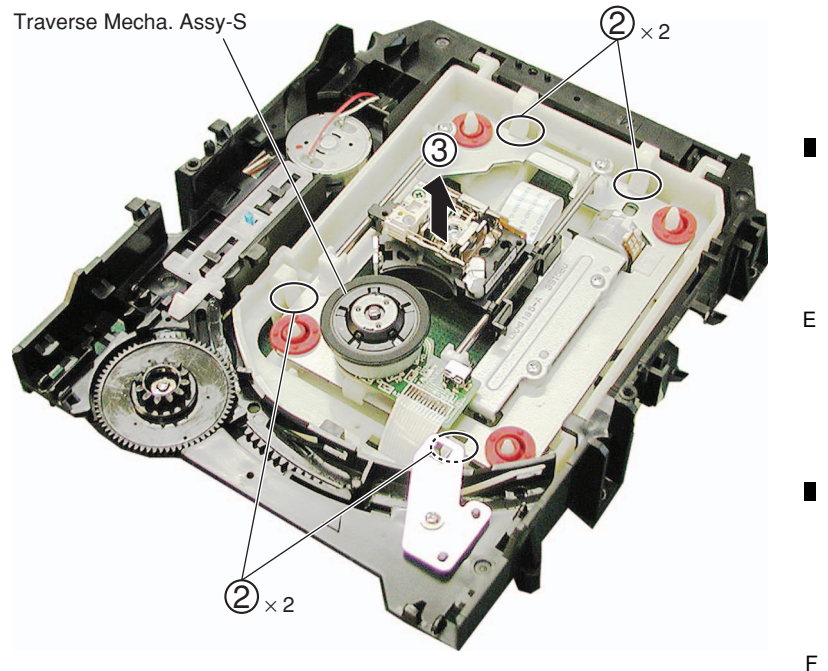
F

2 Traverse Mecha. Assy-S

- ① Dislodge the flexible cables from their packaged placement.



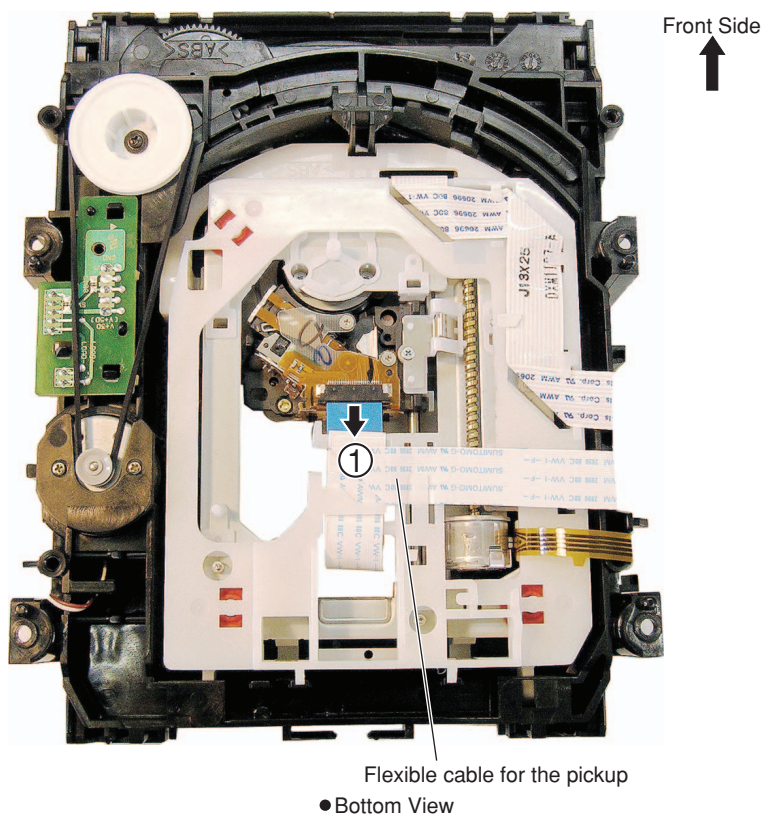
- ② Remove the four hooks.
- ③ Remove the Traverse Mecha. Assy-S.



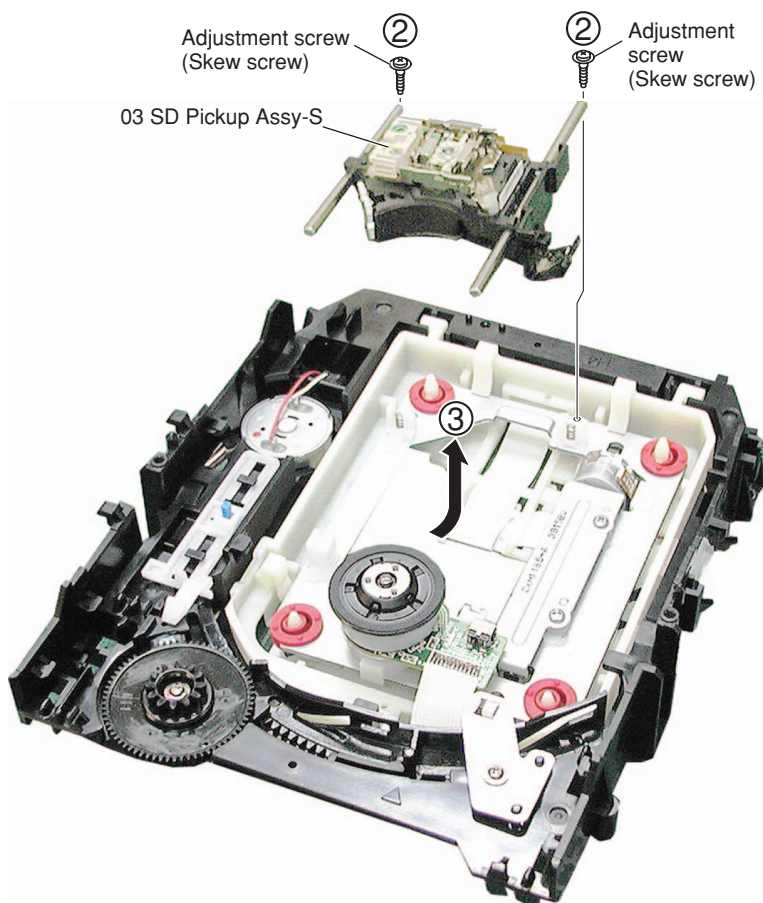
3 03 SD Pickup Assy-S

Note: The 03 SD Pickup Assy-S can be removed without removing the Traverse Mecha. Assy-S. (shown as Step 2.)

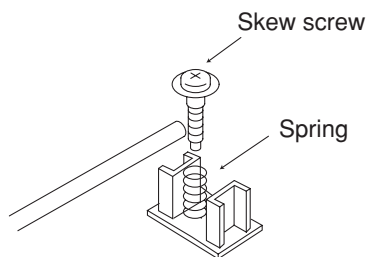
- ① Remove the flexible cable for the pickup.



- ② Remove the two adjustment screws.
- ③ Remove the 03 SD Pickup Assy-S.

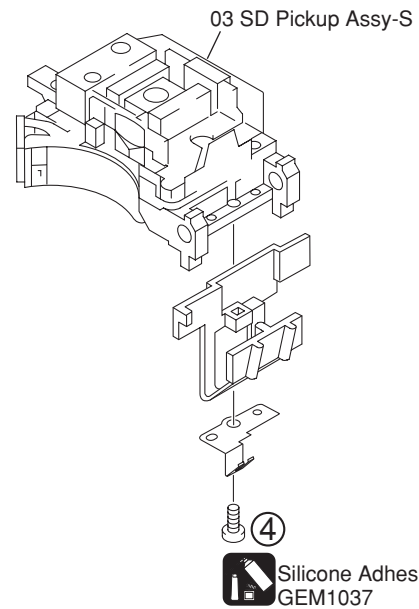


Note:
Be careful not to lose the spring for the skew screw.




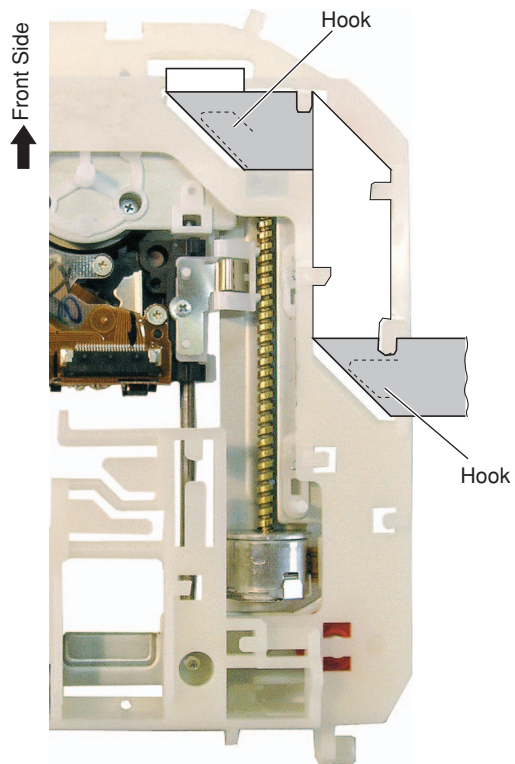
- ④ Remove the one screw.

Note: The screw is secured with the silicone adhesive.
Make sure to apply the silicone adhesive after
reattaching the screw.



Arrangement of the flexible cable for the spindle motor

 : Conductive surface



● Bottom View

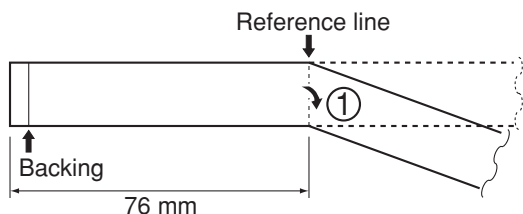
Arrangement of the flexible cable for the pickup

 : Conductive surface

Note:

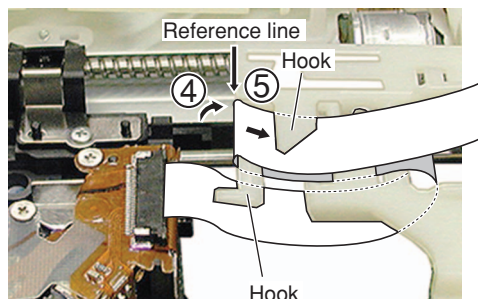
Be sure to move the 03 SD Pickup Assy-S to the innermost perimeter.

- ① Fold the flexible cable of pickup with the backing outward in the illustration below.



- ④ Hook the part folded in Step ① to the hook.

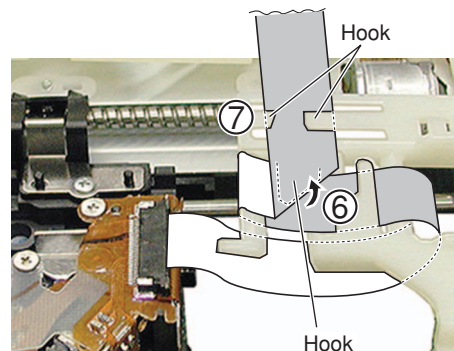
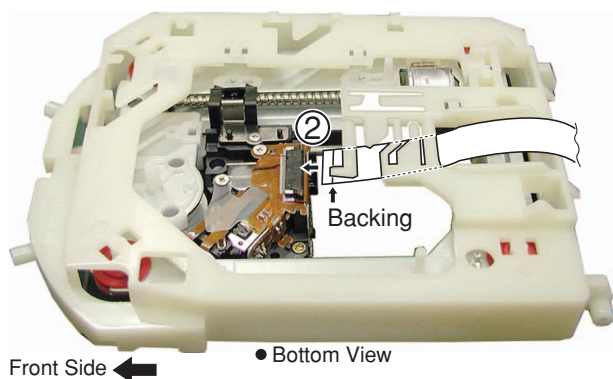
- ⑤ Pass the flexible cable through the hook.



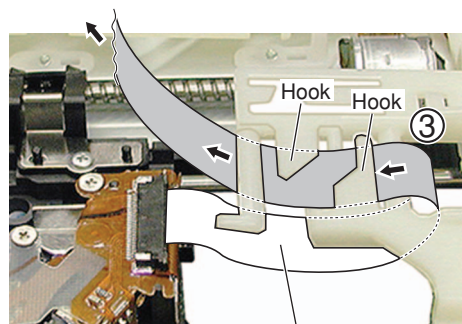
- ② Attach the flexible cable of the pickup to the connector.

- ⑥ Fold the flexible cable along the hook.

- ⑦ Pass the flexible cable through the hook.



- ③ Pass the flexible cable through the hook.



Make sure that the cable is loose

7.2 IC

- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

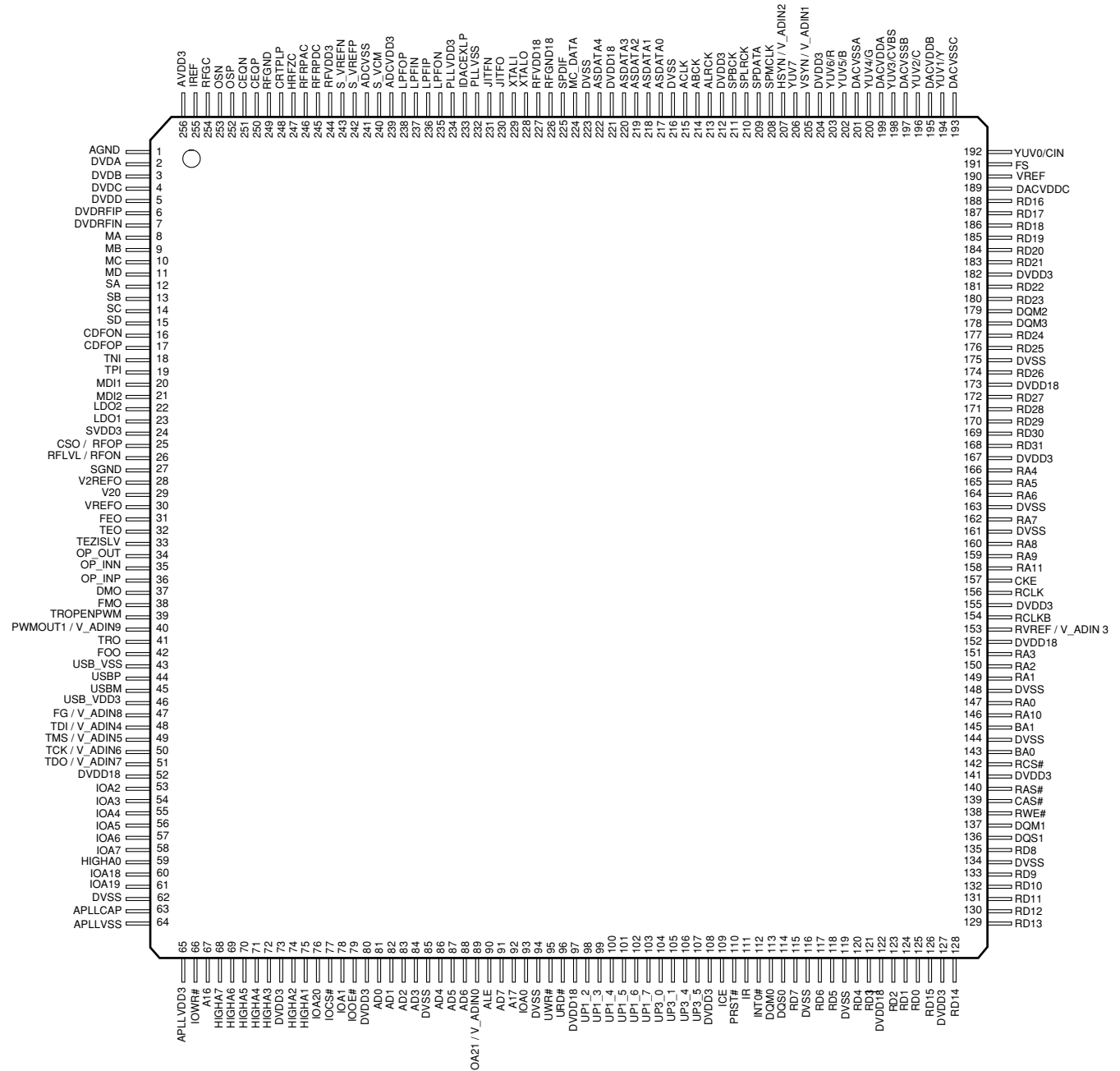
• List of IC

MT1389EE-L1

■ MT1389EE-L1 (DVDM ASSY : IC201)

- DVD IC

• Pin Arrangement



● Block Diagram

A

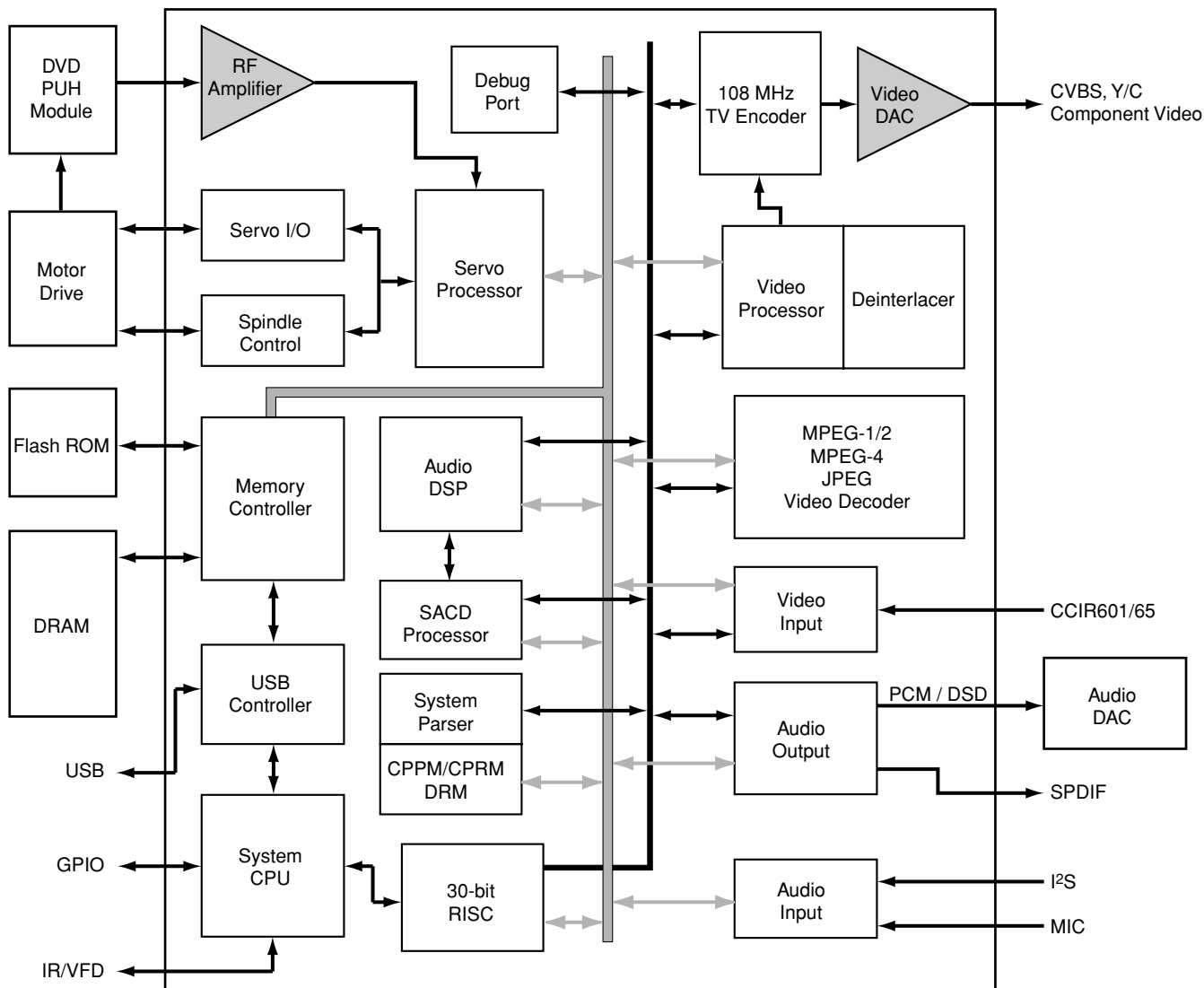
B

C

D

E

F



● Pin Function

■ RF Interface (28)

No.	Name	Alt.	I/O	Function
226	RFGND18		Ground	Analog ground
227	RFVDD18		Power	Analog power 1.8V
250	CEQP		Analog output	EQ offset loop capacitance
251	CEQN		Analog output	EQ offset loop capacitance
252	OSP		Analog output	RF Offset cancellation capacitor connecting
253	OSN		Analog output	RF Offset cancellation capacitor connecting
254	RFGC		Analog output	RF AGC loop capacitor connecting for DVD-ROM
255	IREF		Analog Input	Current reference input. It generates reference current for RF path. Connect an external 15K resistor to this pin and AVSS.
256	AVDD3		Power	Analog power 3.3V
1	AGND		Ground	Analog ground
2	DVDA		Analog Input	AC coupled input path A
3	DVDB		Analog Input	AC coupled input path B
4	DVDC		Analog Input	AC coupled input path C
5	DVDD		Analog Input	AC coupled input path D
6	DVDRFIP		Analog Input	AC coupled DVD RF signal input RFIP
7	DVDRFIN		Analog Input	AC coupled DVD RF signal input RFIN
8	MA		Analog Input	DC coupled main-beam RF signal input A
9	MB		Analog Input	DC coupled main-beam RF signal input B
10	MC		Analog Input	DC coupled main-beam RF signal input C
11	MD		Analog Input	DC coupled main-beam RF signal input D
12	SA		Analog Input	DC coupled sub-beam RF signal input A
13	SB		Analog Input	DC coupled sub-beam RF signal input B
14	SC		Analog Input	DC coupled sub-beam RF signal input C
15	SD		Analog Input	DC coupled sub-beam RF signal input D
16	CDFON		Analog Input	CD focusing error negative input
17	CDFOP		Analog Input	CD focusing error positive input
18	TNI		Analog Input	3 beam satellite PD signal negative input
19	TPI		Analog Input	3 beam satellite PD signal positive input

■ ALPC (4)

No.	Name	Alt.	I/O	Function
20	MDI1		Analog Input	Laser power monitor input
21	MDI2		Analog Input	Laser power monitor input
22	LDO2		Analog Output	Laser driver output
23	LDO1		Analog Output	Laser driver output

■ ADC for SACD (5)

No.	Name	Alt.	I/O	Function
239	ADCVDD3		Power	Analog 3.3V Power for ADC
240	S_VCM		Analog Inout	SACD- Common mode reference
241	ADCVSS		Ground	Analog ground for ADC
242	S_VREFP		Analog Inout	SACD- TOP Reference
243	S_VREFN		Analog Inout	SACD- Bottom Reference

■ Reference Voltage (3)

No.	Name	Alt.	I/O	Function
28	V2REFO		Analog output	Reference voltage 2.8V
29	V20		Analog output	Reference voltage 2.0V
30	VREFO		Analog output	Reference voltage 1.4V

■ Analog Monitor Output (7)

No.	Name	Alt.	I/O	Function
24	SVDD3		Power	Analog power 3.3V
25	CSO	RFOP	Analog output	Central servo Positive main beam summing output
26	RFLVL	RFON	Analog output	RFRP low pass, or Negative main beam summing output
27	SGND		Ground	Analog ground
31	FEO		Analog output	Focus error monitor output
32	TEO		Analog output	Tracking error monitor output
33	TEZISLV		Analog output	TE Slicing Level

■ Analog Servo Interface (6)

No.	Name	Alt.	I/O	Function
244	RFVDD3		Power	Analog Power
245	RFRPDC		Analog output	RF ripple detect output
246	RFRPAC		Analog Input	RF ripple detect input(through AC-coupling)
247	HRFZC		Analog Input	High frequency RF ripple zero crossing
248	CRTPLP		Analog output	Defect level filter capacitor connecting
249	RFGND		Ground	Analog Ground

■ RF Data PLL Interface (9)

No.	Name	Alt.	I/O	Function
230	JITFO		Analog output	The output terminal of RF jitter meter.
231	JITFN		Analog Input	The input terminal of RF jitter meter.
232	PLLSS		Ground	Ground pin for data PLL and related analog circuitry.
233	IDACEXLP		Analog output	Data PLL DAC Low-pass filter
234	PLLVD3		Power	Power pin for data PLL and related analog circuitry.
235	LPFON		Analog Output	The negative output of loop filter amplifier
236	LPFIP		Analog Input	The positive input terminal of loop filter amplifier.
237	LPFIN		Analog Input	The negative input terminal of loop filter amplifier.
238	LPFOP		Analog Output	The positive output of loop filter amplifier

■ Motor and Actuator Driver Interface (10)

No.	Name	Alt.	I/O	Function
34	OP_OUT		Analog output	Op amp output.
35	OP_INN		Analog input	Op amp negative input
36	OP_INP		Analog input	Op amp positive input
37	DMO		Analog Output	Disk motor control output. PWM output.
38	FMO		Analog Output	Feed motor control. PWM output.
39	TROPENPWM		Analog Output	Tray PWM output / Tray open output.
40	PWMOUT1	V_ADIN9	Analog Output	1st General PWM output, or Version AD input 9
41	TRO		Analog Output	Tracking servo output. PDM output of tracking servo compensator.
42	FOO		Analog Output	Focus servo output. PDM output of focus servo compensator
47	FG (Digital pin)	V_ADIN8	LVTTTL 3.3V Input, Schmitt Input, pull-up , with analog input path for V_ADIN8	Motor Hall sensor input, or Version AD input 8

General Power / Ground (32)

No.	Name	Alt.	I/O	Function
52, 97, 122, 152, 173, 221	DVDD18		Power	1.8V power pin for internal digital circuitry
85, 116, 144, 163, 216	DVSS		Ground	1.8V Ground pin for internal digital circuitry
73, 80, 108, 127, 141, 155, 167, 182, 212	DVDD3		Power	3.3V power pin for internal digital circuitry
62, 94, 119, 134, 148, 161, 175, 223	DVSS		Ground	3.3V Ground pin for internal digital circuitry
204	DVDD3		Power	3.3V power pin Video DAC digital circuitry only
63	APLLCAP		Analog Inout	APLL External Capacitance connection
64	APLLVSS		Ground	Ground pin for audio clock circuitry
65	APLLVDD3		Power	3.3V Power pin for audio clock circuitry

Micro Controller and Flash Interface (48)

No.	Name	Alt.	I/O	Function
59	HIGHA0		Inout, 2-16MA, SR, PU	Microcontroller address 8
75	HIGHA1		Inout, 2-16MA, SR, PU	Microcontroller address 9
74	HIGHA2		Inout, 2-16MA, SR, PU	Microcontroller address 10
72	HIGHA3		Inout, 2-16MA, SR, PU	Microcontroller address 11
71	HIGHA4		Inout, 2-16MA, SR, PU	Microcontroller address 12
70	HIGHA5		Inout, 2-16MA, SR, PU	Microcontroller address 13
69	HIGHA6		Inout, 2-16MA, SR, PU	Microcontroller address 14
68	HIGHA7		Inout, 2-16MA, SR, PU	Microcontroller address 15
91	AD7		Inout, 2-16MA, SR	Microcontroller address/data 7
88	AD6		Inout, 2-16MA, SR	Microcontroller address/data 6
87	AD5		Inout, 2-16MA, SR	Microcontroller address/data 5
86	AD4		Inout, 2-16MA, SR	Microcontroller address/data 4
84	AD3		Inout, 2-16MA, SR	Microcontroller address/data 3
83	AD2		Inout, 2-16MA, SR	Microcontroller address/data 2
82	AD1		Inout, 2-16MA, SR	Microcontroller address/data 1
81	AD0		Inout, 2-16MA, SR	Microcontroller address/data 0
93	IOA0		Inout, 2-16MA, SR, PU	Microcontroller address 0 / IO
78	IOA1		Inout, 2-16MA, SR, PU	Microcontroller address 1 / IO
53	IOA2		Inout, 2-16MA, SR, PU	Microcontroller address 2 / IO
54	IOA3		Inout, 2-16MA, SR, PU	Microcontroller address 3 / IO
55	IOA4		Inout, 2-16MA, SR, PU	Microcontroller address 4 / IO
56	IOA5		Inout, 2-16MA, SR, PU	Microcontroller address 5 / IO
57	IOA6		Inout, 2-16MA, SR, PU	Microcontroller address 6 / IO
58	IOA7		Inout, 2-16MA, SR, PU	Microcontroller address 7 / IO
67	A16		Output, 2-16MA, SR	Flash address 16
92	A17		Output, 2-16MA, SR	Flash address 17
60	IOA18		Inout, 2-16MA, SR, SMT	Flash address 18 / IO
61	IOA19		Inout, 2-16MA, SR, SMT	Flash address 19 / IO
76	IOA20		Inout, 2-16MA, SR, SMT	Flash address 20 / IO
89	IOA21	V_ADINO	Inout, 2-16MA, SR, SMT	Flash address 21 / IO While External FLASH size <= 2MB: Version AD input port 0, or GPIO

A

B

C

D

No.	Name	Alt.	I/O	Function
90	ALE		Inout, 2-16MA, SR, PU, SMT	Microcontroller address latch enable
79	IOOE#		Inout, 2-16MA, SR, SMT	Flash output enable, active low / IO
66	IOWR#		Inout, 2-16MA, SR, SMT	Flash write enable, active low / IO
77	IOCS#		Inout, 2-16MA, SR, PU, SMT	Flash chip select, active low / IO
95	UWR#		Inout, 2-16MA, SR, PU, SMT	Microcontroller write strobe, active low
96	URD#		Inout, 2-16MA, SR, PU, SMT	Microcontroller read strobe, active low
98	UP1_2		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-2
99	UP1_3		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-3
100	UP1_4		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-4
101	UP1_5		Inout, 4MA, SR, PU, SMT	Microcontroller port 1-5
102	UP1_6	SCL	Inout, 4MA, SR, PU, SMT	Microcontroller port 1-6 I ² C clock pin
103	UP1_7	SDA	Inout, 4MA, SR, PU, SMT	Microcontroller port 1-7 I ² C data pin
104	UP3_0	RXD	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-0 8032 RS232 RXD
105	UP3_1	TXD	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-1 8032 RS232 TXD
106	UP3_4	RXD SCL	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-4 Hardwired RD232 RXD I ² C clock pin
107	UP3_5	TXD SDA	Inout, 4MA, SR, PU, SMT	Microcontroller port 3-5 Hardwired RD232 TXD I ² C data pin
111	IR		Input, SMT	IR control signal input
112	INT0#		Inout, 2-16MA, SR, PU, SMT	Microcontroller external interrupt 0, active low

E

F

Audio Interface (14)

No.	Name	Alt.	I/O	Function
208	SPMCLK	SCLK0	Inout	Audio DAC master clock of SPDIF input While SPDIF input is not used: Serial interface port 0 clock pin GPIO
209	SPDATA	SDIN0	Inout	Audio data of SPDIF input While SPDIF input is not used: Serial interface port 0 data-in GPIO
210	SPLRCK	SDO0	Inout	Audio left/right channel clock of SPDIF input While SPDIF input is not used: Serial interface port 0 data-out GPIO
211	SPBCK	SDCS0 ASDATA5	Inout	Audio bit clock of SPDIF input While SPDIF input is not used: Serial interface port 0 chip select Audio serial data 5 part I : DSD data sub-woofer channel or Microphone output GPIO
213	ALRCK		Inout 4MA, PD, SMT	Audio left/right channel clock Trap value in power-on reset: 1 : use external 373 0 : use internal 373
214	ABCK	Fs64	Output 4MA	Audio bit clock Phase de-modulation
215	ACLK		Inout, 4MA	Audio DAC master clock
217	ASDATA0		Inout, 4MA, PD SMT	Audio serial data 0 (Front-Left/Front-Right) DSD data left channel Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation
218	ASDATA1		Inout, 4MA, PD SMT	Audio serial data 1 (Left-Surround/Right-Surround) DSD data right channel Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: GPIO
219	ASDATA2		Inout, 4MA, PD SMT	Audio serial data 2 (Center/LFE) DSD data left surround channel Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: GPIO
220	ASDATA3		Inout, 4MA, PD SMT	Audio serial data 3 (Center-back/ Center-left-back/Center-right-back, in 6.1 or 7.1 mode) DSD data right surround channel Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: GPIO
222	ASDATA4	INT1#	Inout, 4MA, PD SMT	Audio serial data 4 (Down-mixed Left/Right) DSD data center channel Trap value in power-on reset : 1 : manufactory test mode 0 : normal operation While only 2 channels output: Microcontroller external interrupt 1 GPIO
224	MC_DATA	INT2#	Inout	Microphone serial input While not support Microphone: Microcontroller external interrupt 2 GPIO
225	SPDIF		Output, 2-16MA, SR : ON/OFF	SPDIF output

Video Interface (18)

No.	Name	Alt.	I/O	Function
189	DACVDDC		Power	3.3V power pin for VIDEO DAC circuitry
190	VREF		Analog	Bandgap reference voltage
191	FS		Analog	Full scale adjustment
192	YUV0	CIN	Output 4mA, SR	Video data output bit 0 Compensation capacitor
193	DACVSSC		Ground	Ground pin for VIDEO DAC circuitry
194	YUV1	Y	Output 4mA, SR	Video data output bit 1 Analog Y output
195	DACVDDDB		Power	3.3V power pin for VIDEO DAC circuitry
196	YUV2	C	Output 4mA, SR	Video data output bit 2 Analog chroma output
197	DACVSSB		Ground	Ground pin for VIDEO DAC circuitry
198	YUV3	CVBS	Output 4mA, SR	Video data output bit 3 Analog composite output
199	DACVDDA		Power	3.3V power pin for VIDEO DAC circuitry
200	YUV4	Y/G	Output 4mA, SR	Video data output bit 4 Green or Y
201	DACVSSA		Ground	Ground pin for VIDEO DAC circuitry
202	YUV5	B/Cb/Pb	Output 4mA, SR	Video data output bit 5 Blue or CB
203	YUV6	R/Cr/Pr	Output 4mA, SR	Video data output bit 6 Red or CR
205	VSYN	V_ADIN1	Inout 4mA, SR SMT	Vertical sync input/output While no External TV-encoder: Vertical sync for video-input Version AD input port 1 GPIO
206	YUV7	INT3# ASDATA5	Inout 4mA, SR SMT	Video data output bit 7 While no External TV-encoder: Microcontroller external interrupt 3 Audio serial data 5 part II : DSD data sub-woofer channel or Microphone output GPIO
207	HSYN	INT4# V_ADIN2	Inout 4mA, SR SMT	Horizontal sync input/output While no External TV-encoder: Horizontal sync for video-input Microcontroller external interrupt 4 Version AD input port 2 GPIO

MISC (8)

No.	Name	Alt.	I/O	Function
43	USB_VSS		USB Ground	USB ground pin
44	USBP		Analog Inout	USB port DPLUS analog pin
45	USBM		Analog Inout	USB port DMINUS analog pin
46	USB_VDD3		USB Power	USB Power pin 3.3V
110	PRST#		Input PU, SMT	Power on reset input, active low
109	ICE		Input PD, SMT	Microcontroller ICE mode enable
228	XTALO		Output	27M crystal out
229	XTALI		Input	27M crystal in

■ DRAM Interface (63)(sorted by position)

No.	Name	Alt.	I/O	Function
188	RD16	LLC_CLK SMPTE_C[0]	Inout Pull-Down	DRAM data 16 While using 16-bits wide DRAM: Line Locked Clock input/output Digital Video output C bit 0 GPIO
187	RD17	YUVIN0 SMPTE_C[1]	Inout Pull-Down	DRAM data 17 While using 16-bits wide DRAM: Video input data 0 Digital Video output C bit 1 GPIO
186	RD18	YUVIN1 SMPTE_C[2]	Inout Pull-Down	DRAM data 18 While using 16-bits wide DRAM: Video input data 1 Digital Video output C bit 2 GPIO
185	RD19	YUVIN2 SMPTE_C[3]	Inout Pull-Down	DRAM data 19 While using 16-bits wide DRAM: Video input data 2 Digital Video output C bit 3 GPIO
184	RD20	YUVIN3 SMPTE_C[4]	Inout Pull-Down	DRAM data 20 While using 16-bits wide DRAM: Video input data 3 Digital Video output C bit 4 GPIO
183	RD21	YUVIN4 SMPTE_C[5]	Inout Pull-Down	DRAM data 21 While using 16-bits wide DRAM: Video input data 4 Digital Video output C bit 5 GPIO
181	RD22	YUVIN5 SMPTE_C[6]	Inout Pull-Down	DRAM data 22 While using 16-bits wide DRAM: Video input data 5 Digital Video output C bit 6 GPIO
180	RD23	YUVIN6 SMPTE_C[7]	Inout Pull-Down	DRAM data 23 While using 16-bits wide DRAM: Video input data 6 Digital Video output C bit 7 GPIO
179	DQM2	YUVIN7	Inout Pull-Up	Data Mask 2 While using 16-bits wide DRAM: Video input data 7 GPIO
178	DQM3	INT6# SMPTE_CLK USB_CLK	Inout Pull-Up	Data Mask 3 While using 16-bits wide DRAM: Microcontroller external interrupt 6 Digital Video output Clock USB port CLK input (48MHz) part II GPIO
177	RD24	SDIN1 MS_BS SMPTE_Y[0]	Inout Non-pull	DRAM data 24 While using 16-bits wide DRAM: Serial interface port 1 data-in MS Card BS pin part II Digital Video output Y bit 0 GPIO
176	RD25	SDO1 MS_SDIO SMPTE_Y[1]	Inout Non-pull	DRAM data 25 While using 16-bits wide DRAM: Serial interface port 1 data-out MS Card SDIO pin part II Digital Video output Y bit 1 GPIO

A

B

C

D

E

F

No.	Name	Alt.	I/O	Function
174	RD26	SDCS1 MSCLK SMPTE_Y[2]	Inout Non-pull	DRAM data 26 While using 16-bits wide DRAM: Serial interface port 1 chip select Memory Stick Clock part II Digital Video output Y bit 2 GPIO
172	RD27	SCLK2 SDCLK SMPTE_Y[3]	Inout Non-pull	DRAM data 27 While using 16-bits wide DRAM: Serial interface port 2 clock pin Security Disk Clock part II Digital Video output Y bit 3 GPIO
171	RD28	SDIN2 SD_CMD SMPTE_Y[4]	Inout Non-pull	DRAM data 28 While using 16-bits wide DRAM: Serial interface port 2 data-in SD Card CMD pin part II Digital Video output Y bit 4 GPIO
170	RD29	SDO2 SD_DAT SMPTE_Y[5]	Inout Non-pull	DRAM data 29 While using 16-bits wide DRAM: Serial interface port 2 data-out SD Card Data pin part II Digital Video output Y bit 5 GPIO
169	RD30	SDCS2 SMPTE_Y[6]	Inout Pull-Up	DRAM data 30 While using 16-bits wide DRAM: Serial interface port 2 chip select Digital Video output Y bit 6 GPIO
168	RD31	INT5# ASDATA5 SMPTE_Y[7]	Inout Pull-Up	DRAM data 31 While using 16-bits wide DRAM: Microcontroller external interrupt 5 Audio serial data 5 part III : DSD data sub-woofer channel or Microphone output Digital Video output Y bit 7 GPIO
166	RA4		Inout	DRAM address 4
165	RA5		Inout	DRAM address 5
164	RA6		Inout	DRAM address 6
162	RA7		Inout	DRAM address 7
160	RA8		Inout	DRAM address 8
159	RA9		Inout	DRAM address 9
158	RA11	GPIO	Inout Pull-Down	DRAM address bit 11 While using DRAM size <=4MB: GPIO
157	CKE		output	DRAM clock enable
156	RCLK		Inout	DRAM clock
154	RCLKB	USB_CLK	Inout	DRAM clock invert While not using DDR: I) USB port CLK input (48MHz) part I
153	RVREF	V_ADIN3	Analog Inout	Reference voltage for DDR DRAM While not using DDR : Version AD input port 3
151	RA3		Inout	DRAM address 3
150	RA2		Inout	DRAM address 2
149	RA1		Inout	DRAM address 1
147	RA0		Inout	DRAM address 0
146	RA10		Inout	DRAM address 10
145	BA1		Inout	DRAM bank address 1
143	BA0		Inout	DRAM bank address 0

No.	Name	Alt.	I/O	Function
142	RCS#		output	DRAM chip select, active low
140	RAS#		output	DRAM row address strobe, active low
139	CAS#		output	DRAM column address strobe, active low
138	RWE#		output	DRAM Write enable, active low
137	DQM1		Inout	Data mask 1
136	DQS1	INT7# MS_BS	Inout	Data strobe 1 for DDR DRAM While not using DDR: Microcontroller external interrupt 7 MS Card BS pin part I GPIO
135	RD8		Inout	DRAM data 8
133	RD9		Inout	DRAM data 9
132	RD10		Inout	DRAM data 10
131	RD11		Inout	DRAM data 11
130	RD12		Inout	DRAM data 12
129	RD13		Inout	DRAM data 13
128	RD14		Inout	DRAM data 14
126	RD15		Inout	DRAM data 15
125	RD0		Inout	DRAM data 0
124	RD1		Inout	DRAM data 1
123	RD2		Inout	DRAM data 2
121	RD3		Inout	DRAM data 3
120	RD4		Inout	DRAM data 4
118	RD5		Inout	DRAM data 5
117	RD6		Inout	DRAM data 6
115	RD7		Inout	DRAM data 7
114	DQS0	SCLK1 MS_SDIO	Inout	Data strobe 0 for DDR DRAM While not using DDR: Serial interface port 1 clock pin MS Card SDIO pin part I GPIO
113	DQM0		Inout	Data mask 0

■ JTAG Interface (4)

No.	Name	Alt.	I/O	Function
48	TDI	SDO3 V_ADIN4 SD_DAT	Inout	JTAG data in While not using Boundary Scan: Serial interface port 3 data-out Version AD input port 4 SD Card Data pin part I GPIO
49	TMS	SDIN3 V_ADIN5 SD_CMD	Inout	While not using Boundary Scan: Serial interface port 3 data-in Version AD input port 5 SD Card CMD pin part I GPIO
50	TCK	SCLK3 V_ADIN6 SDCLK	Inout	JTAG clock While not using Boundary Scan: Serial interface port 3 clock pin Version AD input port 6 Security Disk Clock part I GPIO
51	TDO	SDCS3 V_ADIN7 MSCLK	Inout	JTAG data out While not using Boundary Scan: Serial interface port 3 chip-select Version AD input port 7 Memory Stick Clock part I GPIO

7.3 DISC / CONTENT FORMAT PLAYBACK COMPATIBILITY

Disc / content format playback compatibility

This player is compatible with a wide range of disc types (media) and formats. Playable discs will generally feature one of the following logos on the disc and/or disc packaging. Note however that some disc types, such as recordable CD and DVD, may be in an unplayable format—see below for further compatibility information.

Please also note that recordable discs cannot be recorded using this player.



-  is a trademark of Fuji Photo Film Co. Ltd.
- Also compatible with KODAK Picture CD

CD-R/RW compatibility

- Compatible formats: CD-Audio, Video CD/ Super VCD, ISO 9660 CD-ROM* containing

MP3, WMA or JPEG files

** ISO 9660 Level 1 or 2 compliant. CD physical format: Mode1, Mode2 XA Form1. Romeo and Joliet file systems are both compatible with this player.*

- Multi-session playback: No
- Unfinalized disc playback: No

DVD-R/RW compatibility

- Compatible formats: DVD-Video, Video Recording (VR)*
** Edit points may not play exactly as edited; screen may go momentarily blank at edited points.*
- Unfinalized playback: No
- WMA/MP3/JPEG file playback on DVD-R/RW: No

Compressed audio compatibility

- Compatible formats: MPEG-1 Audio Layer 3 (MP3), Windows Media Audio (WMA)
- Sampling rates: 32, 44.1 or 48kHz
- Bit-rates: Any (128Kbps or higher recommended)
- VBR (variable bit rate) MP3 playback: No
- VBR WMA playback: No
- WMA lossless encoding compatible: No
- DRM (Digital Rights Management) compatible: Yes (DRM-protected audio files will *not* play in this player)
- File extensions: .mp3, .wma (these must be used for the player to recognize MP3 and WMA files – do not use for other file types)
- File structure: Up to 299 folders; up to 648 folders and files combined

About WMA



The Windows Media[®] logo printed on the box indicates that this player can playback Windows Media Audio content.

WMA is an acronym for Windows Media Audio and refers to an audio compression technology developed by Microsoft Corporation. WMA content can be encoded by using Windows Media[®] Player version 7, 7.1, Windows Media[®] Player for Windows[®] XP, or Windows Media[®] Player 9 Series.

Microsoft, Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

JPEG file compatibility

- Compatible formats: Baseline JPEG and EXIF 2.2* still image files up to a resolution of 3072 x 2048.
*File format used by digital still cameras
- Progressive JPEG compatible: No
- File extensions: .jpg (must be used for the player to recognize JPEG files – do not use for other file types)
- File structure: Up to 299 folders; up to 648 folders and files combined

PC-created disc compatibility

Discs recorded using a personal computer may not be playable in this unit due to the setting of the application software used to create the disc. In these particular instances, check with the software publisher for more detailed information.

Discs recorded in packet write mode (UDF format) are not compatible with this player.

Check the DVD-R/RW or CD-R/RW software disc boxes for additional compatibility information.

1

2

3

4

7.4 CLEANING



A Before shipping out the product, be sure to clean the following positions by using the prescribed cleaning tools:

Position to be cleaned	Cleaning tools
Pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

B

C

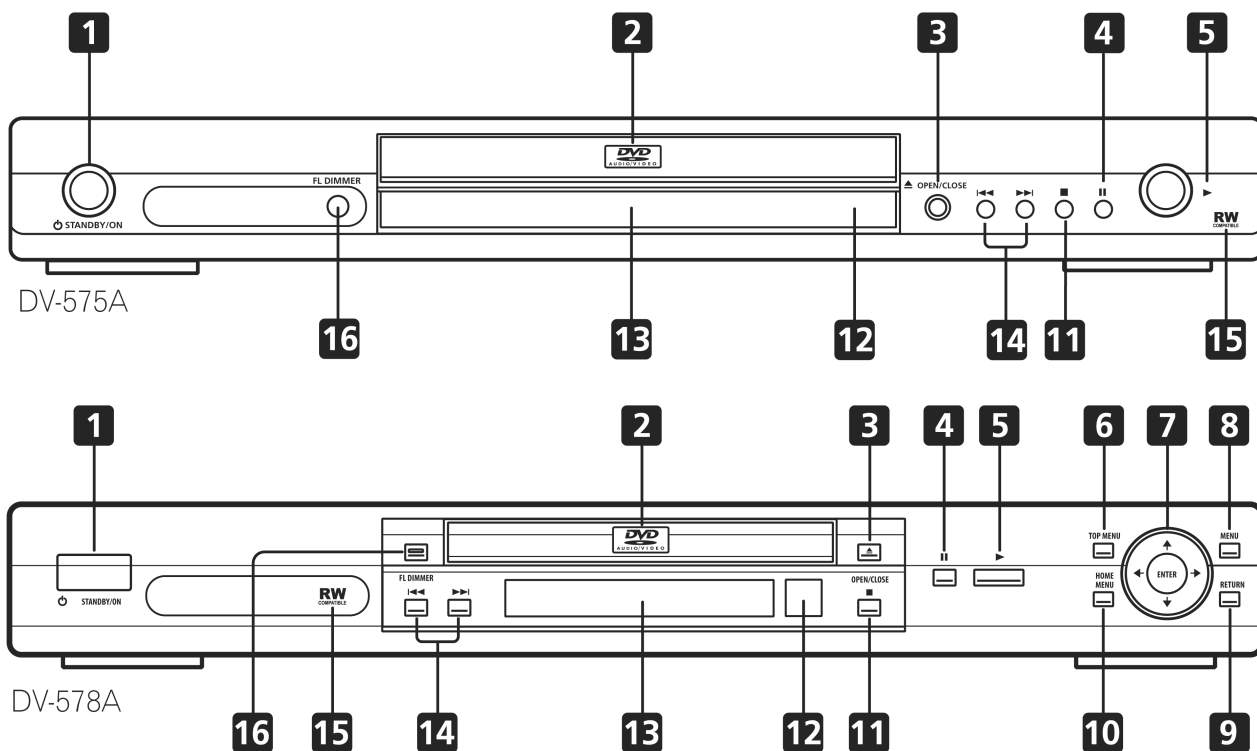
D

E

F

8. PANEL FACILITIES

Front panel



1 **STANDBY/ON**

2 **Disc tray**

3 **OPEN/CLOSE**

4 **PLAY**

5 **PLAY**

6 **TOP MENU**

7 **ENTER & cursor buttons**

8 **MENU**

9 **RETURN**

10 **HOME MENU**

11 **STOP**

12 **Remote control sensor**

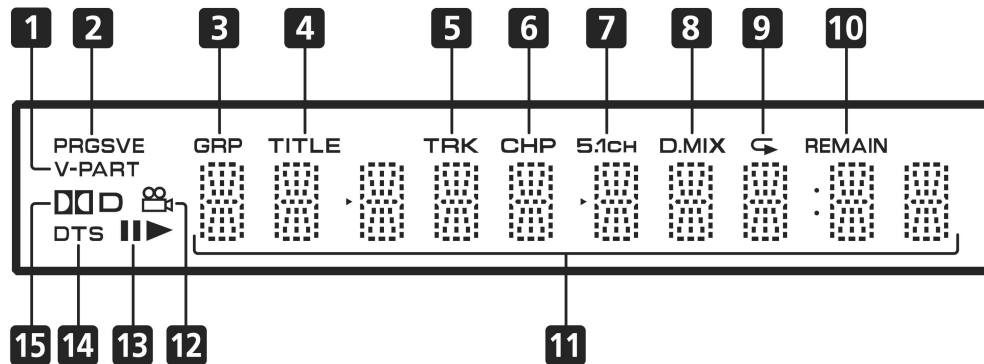
13 **Display**

14 **FAST REVERSE and FAST FORWARD**

15 **RW Compatible**

16 **DIMMER** Press to change the brightness of the front panel display.

Display



1 V-PART

Lights when playing a video part of a DVD disc.

2 PRGSVE

Lights when the player is set to output progressive scan video.

3 GRP

Indicates that the character display is showing a DVD-Audio group number.

4 TITLE

Indicates that the character display is showing a DVD title number.

5 TRK

Indicates that the character display is showing a DVD-Audio, SACD, CD or Video CD/Super VCD track number.

6 CHP

Indicates that the character display is showing a DVD chapter number.

7 5.1CH

Lights when analog 5.1 channel output is selected.

8 D.MIX

During multichannel audio playback, indicates that the output signal has been "downmixed" from the original audio source. This is an automatic function performed by the player in order to present the most appropriate audio mix to the speakers present in your system.

9

Lights in any of the repeat play modes.

10 REMAIN

Indicates that the character display is showing the disc or title/chapter/track remain time.

11 Character display

12

Lights during multi-angle scenes on a DVD disc.

13 II and ►

Indicates whether a disc is playing or paused.

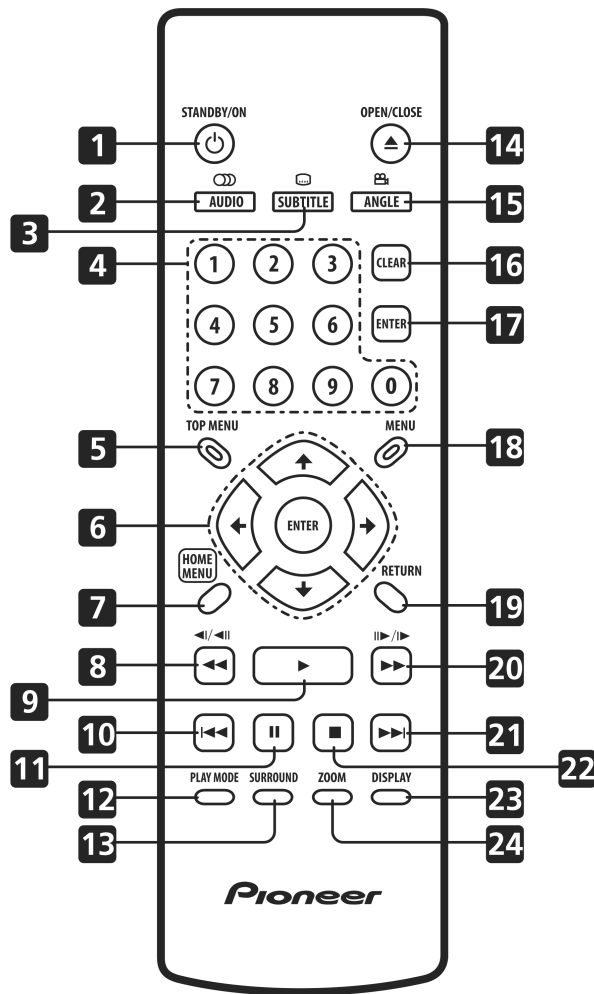
14 DTS

Lights when a DTS soundtrack is playing.

15

Lights when a Dolby Digital soundtrack is playing.

Remote control



- 1 **STANDBY/ON**
- 2 **AUDIO**
- 3 **SUBTITLE**
- 4 **Number buttons**
- 5 **TOP MENU**
- 6 **ENTER & cursor buttons**
- 7 **HOME MENU**
- 8 **<<< and <<I/<<II**
- 9 **>>>**
- 10 **I<<<**

- 11 **II**
- 12 **PLAY MODE**
- 13 **SURROUND**
- 14 **▲ OPEN/CLOSE**
- 15 **ANGLE**
- 16 **CLEAR**
- 17 **ENTER**
- 18 **MENU**
- 19 **RETURN**
- 20 **>>> and I>>/II>>**
- 21 **>>>I**
- 22 **■**
- 23 **DISPLAY**
- 24 **ZOOM**

Using the remote control

Keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote and the remote sensor on the unit.
- The remote has a range of about 7m (23ft.).
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the unit's remote sensor.
- Remote controllers for different devices can interfere with each other. Avoid using remotes for other equipment located close to this unit.
- Replace the batteries when you notice a fall off in the operating range of the remote.

■ Jigs list

A

Name	Jig No.	Remarks
Service Remote Control Unit	GGF1381	diagnosis
DVD Data Disc	GGV1175 (& GGV1171)	diagnosis (ID data setting) • GGV1175 is to be released in May, 2004. Use only GGV1175 after GGV1175 was released because GGV1175 includes all the data of GGV1171.
DVD Test Disc (DVD-Video)	GGV1025	Check of DVD-Video
CD Test Disc	STD-905	Check of CD
DVD Test Disc (DVD-Audio)	GGV1070	Check of DVD-Audio

B

C

D

E

F